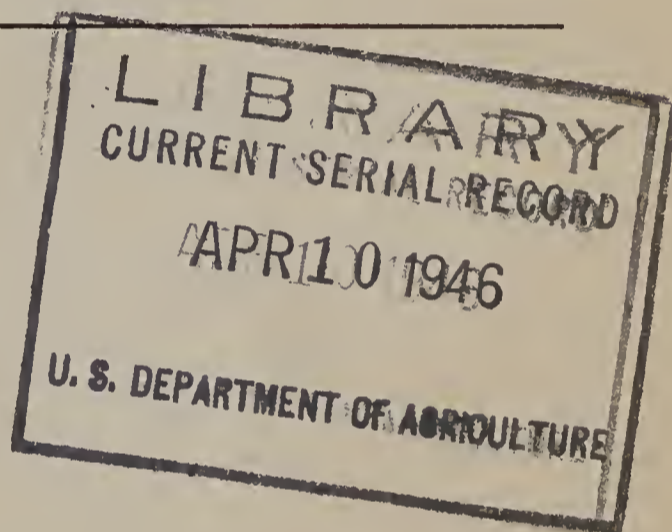


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Report of the Director
OF THE
OFFICE OF MARKETING SERVICES
1945



U. S. DEPARTMENT OF AGRICULTURE

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REPORT OF THE DIRECTOR OF THE OFFICE OF MARKETING SERVICES

UNITED STATES DEPARTMENT OF AGRICULTURE,
OFFICE OF MARKETING SERVICES,
Washington, D. C., August 15, 1945.

HON. CLINTON P. ANDERSON,
Secretary of Agriculture.

DEAR MR. SECRETARY: Herewith is the annual report of the Director of the Office of Marketing Services, which agency was established on January 1, 1945, as a part of the War Food Administration. Transferred to it were certain functions of the Office of Distribution, which was abolished on the same date. On June 30, 1945, upon the abolishment of the War Food Administration, the Office of Marketing Services became an agency of the United States Department of Agriculture.

This report covers the fiscal year ended June 30, 1945—the last year of the war. It covers only work done during the full year in the performance of those functions that were transferred in the middle of the year from the Office of Distribution to the Office of Marketing Services. Moreover, it excludes work done in the performance of functions that during the last half of the year were transferred from the Office of Marketing Services to other Department agencies.

Sincerely yours,

C. W. KITCHEN, *Director.*

FUNCTIONS

AS THE FISCAL year 1945 ended, the Office of Marketing Services was engaged in the following work:

1. It initiated and administered certain War Food Orders.
2. It made recommendations with respect to the time, extent, and conditions of rationing, and to maximum price regulations.
3. It helped to estimate United States supplies of food, determined the food requirements of United States civilians and represented their claims in the food-allocation work of the War Food Administration, and conducted programs aimed at improving civilian nutrition and well-being.
4. It conducted programs for making more efficient the physical distribution and handling of agricultural products from farmer to consumer, for regulating their flow as between markets and seasons, and affecting transportation, storage, market facilities and organization, processing, containers and packaging, and marketing studies and research.
5. It developed and promulgated standards for agricultural products.

6. It conducted services for inspecting, classifying, and grading farm products, including the services required in war procurement programs.

7. It conducted a Nation-wide service for collecting and disseminating market statistics and market news.

8. It administered more than 20 service and regulatory acts governing trading and market operations and marketing-agreement programs.

9. It cooperated with industry in the development of technical and economic improvements, new and substitute processes and products, and new uses for agricultural products.

10. It cooperated with industry, with other agencies of the War Food Administration and the Department of Agriculture, and with many other Government agencies on wartime problems affecting agricultural products, price support, lend-lease procurement, freight equalization, food allocation, food-order compliance, agricultural production goals, labor, rationing, pricing, and priorities for materials and transportation facilities.

WAR FOOD ORDERS

War Food Orders administered by OMS during the year were of several kinds. There were orders to regulate the use of facilities, such as the one issued to assure availability of enough refrigerated space to store the products most important for war purposes. There were restriction orders, such as the dried-milk-products order; conservation orders, such as the fluid-milk order; and set-aside orders, such as the one that required the setting aside for sale to Government agencies of a specified percentage of the Cheddar cheese output. There were economy orders, such as the bread order, which was intended in part to provide for a more economical distribution; and allocation orders, such as the order that divided short supplies of milk sugar among all users.

These orders, developed in consultation with the affected industries to assure workability, were issued only when voluntary means would not obtain the results needed. In all, 136 of them—with necessary amendments—had been issued between January 1943 and the end of the 1945 fiscal year. Sixty-eight orders were in effect as the fiscal year began; 78 were in effect at its close. During that period 28 new orders were issued and 22 orders were terminated. It was OMS policy to terminate or amend orders whenever the specific conditions that had necessitated their issuance changed.

A War Food Order was enforced by several methods. First, OMS through educational methods went a long way toward informing those affected of its existence and of its provisions. An example of the size of this task is the distribution of 300,000 copies of the frozen-dairy-foods order (with its amendments) among interested persons. Again, OMS required reports showing production figures and other information from persons who operate under the set-aside orders. And finally, WFA's Office of Investigatory Services (which during a part of the fiscal year functioned as an OMS Branch) made spot checks, investigated complaints, and turned over evidence of violations to the Department of Justice for appropriate court action.

CIVILIAN FOOD NEEDS

The OMS food program included (1) developing civilian food requirements, (2) representing United States civilians in the food-allocation procedure, (3) encouraging increased distribution of abundant foods and wider distribution of scarce foods through normal trade channels, (4) controlling the distribution of scarce foods to assure fulfillment of essential needs, (5) recommending policies to be followed in the development and administration of rationing programs, and (6) providing for the specialized needs of vulnerable groups.

MARKETING FACILITIES

Work in connection with marketing facilities concerned the storage of farm commodities; the facilitating of transportation of products from farm to consumer by rail, truck, and boat; and the development and planning of market facilities for consuming areas. For example, the OMS cold-storage program resulted in the storing of almost twice as much food in refrigerated warehouses as in prewar years, although shortages of materials limited the expansion of warehouse capacity to about 8 percent.

As another example, cooperation among the carriers, OMS, and other Government agencies resulted in the transportation of a record quantity of food in refrigerator cars, although the number of such cars available for use was about 35,000 fewer than in 1930.

As a third example of this work, OMS assisted in obtaining freight-rate adjustment that saved more than 100 million dollars during the year in charges for transporting farm products. As still another example, OMS prepared a report showing how 100 million dollars could be spent in a postwar public-works program for building wholesale markets for fruits and vegetables—the markets to be built on an entirely self-liquidating basis and to save about 30 million dollars annually in the cost of distribution.

STANDARDIZATION AND RESEARCH

Standards for most agricultural products, including a number of processed foods, have been formulated over a period of years. Use of some of the standards is required if the product is shipped in interstate or foreign commerce or is contracted for future delivery. For most agricultural products, however, the standards are not required but are used voluntarily as quality guides. They are a uniform basis for price quotations, loans on warehoused products, and the regulation or control of shipments under marketing agreements and Federal procurement.

Changing marketing conditions call for adequate standards. OMS technicians are constantly devising new standardization equipment and methods. During the year additional producers discovered that graded products bring higher market prices. Well-graded commodities also prevent economic physical waste and thus reduce distribution costs. Separation into grades permits finding the market that allows the grower the greatest return.

In addition to standardization research, OMS conducted research and studies with respect to classification, grading, preparation, handling, transportation, storage, and market facilities—all with the aim

of smoothing the path of agricultural products as they move from the farm to the consumer.

INSPECTION, CLASSING, AND GRADING

To be effective in marketing, standards must be uniformly applied by Federal and Federal-State classers, inspectors, and graders. These experts use training, experience, and scientific equipment in evaluating the slight variations of color, length, flavor, and the like—the all-important grade factors.

During the fiscal year an inspection service was continued in many of the principal producing areas and receiving centers on fruits and vegetables, hay, beans, grain, tobacco, and other products. Classification service was provided upon request from groups of producers organized for the improvement of their cotton. Grading service was available on dairy and poultry products, rice, meats, wool, and canned fruits and vegetables. Mandatory free inspection of tobacco was provided at designated auction markets where at least a two-thirds majority of producers, voting in a referendum, had expressed a desire for the service. Inspections were made of foods purchased for the armed forces and for domestic distribution to families receiving public aid, for school-lunch programs, for shipment by the Red Cross and for the lend-lease program.

Much of this work was done under cooperative arrangements with the States. Fees collected by the State or other cooperating agency were used to pay the salaries of the inspectors, who were licensed and supervised by the Government, and a percentage to offset the supervision expenditures was paid into the Federal Treasury.

REGULATION

OMS administered a number of laws, the primary purpose of which is to prevent unfair practices. Among them were the Packers and Stockyards Act, the Perishable Agricultural Commodities Act, the United States Warehouse Act, the Federal Seed Act, the Insecticide Act, and the Naval Stores Act. The Packers and Stockyards Act, for example, makes it unlawful for any meat packer to engage in or use an unfair, unjustly discriminatory, or deceptive practice in interstate commerce. The Perishable Agricultural Commodities Act makes it unlawful for any commission merchant, dealer, or broker to handle fresh fruit or fresh vegetables in interstate or foreign commerce without a license from the Secretary of Agriculture, and provides for proceedings to determine an applicant's fitness to engage in business and for denial of license if he is found unfit. The Warehouse Act provides for the voluntary licensing and the bonding of public warehouses engaged in storing certain agricultural commodities; violators are subject to severe penalties. The Federal Seed Act requires the labeling of agricultural and vegetable seeds when they are shipped in interstate commerce, prohibits false advertising of seed, and requires that imported seed meet certain standards of quality.

MARKET NEWS

OMS continued to conduct the popular market news service. Reliable market information is a practical necessity in the operation and

plans of those who produce, buy, or sell agricultural commodities. Without it, the farmers of this country could not hope to obtain the best returns for their efforts and investments. During the 1945 fiscal year daily reports were issued by 71 year-round offices and about 45 temporary offices located in the major producing and distributing centers. The service covered the movement, market supplies, quality, and price trends and quotations on livestock, meats, wool, fruits, vegetables, dairy and poultry products, grain, hay, seeds, feedstuffs, cotton and cottonseed, tobacco, rice, honey, peanuts, and other products.

CIVILIAN DISTRIBUTION

Not only must the civilian population of the United States be allocated an adequate share of our food supply, but the supply must be made to flow adequately to all segments of the population and to all localities. The Office of Marketing Services during the fiscal year worked with other Government agencies to assure United States civilians an adequate food supply.

The OMS part of the job was (1) to assure an adequate civilian food supply by acting as the representative of United States civilians in the food-allocation procedure of the War Food Administration, and as a point of contact between the WFA and the Office of Price Administration with respect to recommendations concerning the administration of food-rationing programs, and (2) to provide for the specialized food needs of vulnerable groups within the population.

DEVELOPMENT OF REQUIREMENTS

Acting as the claimant of United States civilians, OMS twice during the year developed a civilian-food program that established the civilian requirements for various food items needed during the succeeding 12 months to maintain the civilian population at a high level of productive efficiency and to provide as varied and as palatable a diet as wartime conditions would permit.

In the determination of civilian requirements, the civilian demands for the various food items cannot be used as the sole guide. With national income at a record high level, the complete fulfillment of civilian demands would mean that the needs of our armed forces could be but partially met and that even the most critical needs of our allies and of the needy in liberated areas could not be filled. Therefore, food requirements were developed that would (1) provide civilians with enough food, (2) insure the most efficient use of the food supply available, and (3) permit the release of substantial quantities of food to meet the essential needs of other claimants. In determining these requirements the following factors were considered: (1) Historical-consumption patterns, (2) the importance of each food from the standpoint of nutritive value and food habits, (3) estimated civilian demand under current price and income levels, and (4) the feasibility of equitably distributing a short supply.

During the 1945 fiscal year, OMS developed a civilian food program for the calendar year 1945 covering civilian requirements for approximately 250 foods and related items. A similar program was also developed covering requirements for the 1946 fiscal year. All of these items were not under allocation, but requirements for them had to be developed in order to evaluate the over-all adequacy of the total food

supply requested. In addition to the statement of requirements, the program included a discussion of the basis of each requirement, an analysis of consumption levels in previous years, the types of distribution controls contemplated (where needed), and the distribution problems to be expected if the requirements were not met in full. As the civilian representative on the Food Requirements and Allocation Committee and the commodity subcommittees, OMS participated in the determination of 101 United States food allocations, involving approximately 200 food items.

SPECIAL PROGRAMS

In addition to the civilian food program, in June 1945 OMS developed civilian food requirements for use in the determination of 1946-47 production goals. Requirements for this program, which varied considerably from requirement programs for allocation purposes since they could point to desirable shifts in our production pattern, were submitted for approximately 200 individual items. In order that the program would be useful no matter what change came about in the war situation, two complete sets of civilian requirements were developed—the first assuming the end of the Pacific war before the planting of 1946 crops, and the other assuming a longer continuation.

During the war years, the supplies of iron, thiamine, riboflavin, and niacin in the civilian diet increased substantially, owing chiefly to higher levels of flour and bread enrichment. OMS worked with members of the trade and State nutrition workers in furtherance of this program.

DISTRIBUTION OF CIVILIAN FOOD SUPPLIES

Perfect distribution—the availability of foods in the right amounts, at the right time, and in the right places—is never achieved under even the best conditions. Distress-distribution conditions may prevail (1) when general or particular surpluses and shortages occur on a Nation-wide or local basis, or (2) when certain segments of the population are unable to obtain their share of available supplies or to obtain foods for which they have specialized needs. OMS has attacked the problems which the existence of such situations brought by formulating plans (1) to encourage increased distribution of abundant foods or wider distribution of scarce items through normal trade channels, and (2) to control distribution of scarce items in order to insure fulfillment of essential needs and the access of everyone to a share of the short supply.

ABUNDANT FOODS

To encourage the use of foods available in relative abundance, OMS during the first week of each month has prepared a list of the foods expected to be available in relative abundance during the succeeding month. This list is sent to the food-distribution trade, large institutional buyers, women's-page editors, and to various agencies able to convey the information to consumers and thereby encourage the purchase and use of the particular commodities. During the fiscal year, 20 different foods were featured on the abundant list for periods of from 3 to 12 months.

SCARCE FOODS

In cooperation with the Commodity Credit Corporation's Office of Supply, OMS developed a program to meet the prospective shortage of rice, particularly for those areas where this food plays an important role in dietary patterns. Large military requirements for rice for Pacific relief feeding necessitated a 100 percent set-aside of all supplies in the hands of processors beginning in March 1945. For certain segments of our population, rice is an essential in the dietary pattern, and among these groups the rice consumption rate is several times larger than that for the Nation as a whole. Since new-crop rice would not be available until the fall of 1945, it was probable that acute shortages would develop as the result of the set-aside. A program was developed to permit the release of set-aside stocks to civilian distributors whenever acute shortages might develop in those heavy-consumption areas. Another example of OMS action to correct a condition of distress distribution was the adjustments made in WFO 42 that enabled fish canners to purchase enough vegetable oils needed to can available tuna fish supplies.

RATIONING

The distribution of many foods for which an increasing stringency in civilian supplies developed during the last half of the fiscal year—meats, fats and oils, sugar, and some processed foods—was already subject to rationing controls. Although the actual administration of food rationing programs was under OPA jurisdiction, WFA was responsible for (1) determining the need for, time, and extent of food rationing, (2) supplying periodically to OPA information about the supplies of various rationed items available for civilian distribution, and (3) recommending policies to be followed in the development and administration of ration programs. In this work, OMS was the point of contact between WFA and OPA.

Smaller supplies of meats, fats and oils, and sugar for the calendar year 1945 led to a review of the distribution of these items under rationing as among the various classes of civilian users. To insure the best possible distribution of the short supplies available, recommendations were developed that called for substantial revisions by OPA in allotments under rationing. Allotments for industrial users were reduced early in 1945, and beginning in July the OPA lowered the maximum per-meal allowances for restaurants, hotels, and similar institutions. Allotments of rationed foods for industrial users were revised, according to OMS recommendations, in order that supplies of scarce commodities might be used in a way that would encourage and facilitate the use of foods available in relative abundance.

PROVISION FOR SPECIAL NEEDS

The special needs of infants, growing children, workers in heavy industries, and other groups with higher-than-average requirements for specific types of food were recognized and provided for within the national food program. During the fiscal year, special OMS efforts were required to be made to assure the meeting of these needs.

OMS recommendations concerning the higher food requirements of isolated workers and workers in heavy industries resulted in revisions in OPA rationing regulations. To help OPA provide more

adequately for the specialized needs of such workers, OMS developed eligibility classifications and recommended how much the basic ration of workers with special needs should be supplemented. Minimum hospital food allowances were developed to serve as a guide in determining the amount of scarce food that should be assured to hospitals. Programs were developed in cooperation with the CCC's Office of Supply and with OPA to help hospitals to obtain enough butter, poultry, meat, and eggs to satisfy their minimum requirements.

COORDINATION OF NUTRITION PROGRAMS

The wartime nutrition work of organized groups—especially of State, county, and local nutrition committees—has been a powerful force in coordinating available food resources in a constructive program to meet local nutrition needs. During the year one such job was the encouragement of the best use of the available food supply, carried out with the assistance of voluntary nutrition committees organized at Federal, State, and local levels. These committees, some 4,000 of them, are made up primarily of the representatives in the States of various agencies, institutions, and organizations that participate in food and nutrition education programs for citizens.

Coordination of nutrition activities has proceeded first from the coordination of Federal agency programs. A nutrition planning committee, made up of representatives of the Federal agencies that have field services and carry on individual nutrition activities of their own, continued to meet monthly. As a result of these meetings, recommendations and program suggestions were developed and referred to State nutrition committees and individual State agencies.

Special assistance was provided through regional field consultants and executive secretaries detailed to the State Nutrition Committees to facilitate the plans of the State and county committees. In addition, liaison with the public health and medical professions, with labor, with national organizations, and with the food industry and allied industries helped to extend nutrition information.

In informing citizens about food alternates, nutrition committees used all available media to reach the public with known scientific facts about food needs and civilian well-being. States added such activities as State-wide surveys of food supplies, gave forewarnings of impending food shortages, publicized information about menu planning and recipes for alternates to foods in short supply, and encouraged communities to plan more victory gardens and food preservation. An extensive educational program was carried out on the dietary significance of white flour and bread enrichment.

In conferences with State nutrition committee chairmen, in successive monthly issues of the "Nutrition News Letter," in radio programs (some for the exclusive use of nutrition committees), and in moving pictures and other mass-reaching media the most effective use of the wartime food supply was encouraged. At the same time, fundamental principles of nutrition were stressed through popular educational material such as the "Basic 7" food chart and "The National Wartime Nutrition Guide." Articles and other information about nutrition appeared in the monthly OMS periodical "Marketing Activities" in addition to its other coverage, which included standardization, inspection, grading, packaging, labeling, market reporting, market facilities, and other phases of agricultural marketing and distribution.

COOPERATION WITH THE FOOD INDUSTRY

OMS continued the practice of consulting with the industries affected by its programs through Industry Advisory Committees. During the year the number of these committees, which supply information and make recommendations, grew from 111 to 127, and 131 meetings were held. The committees were especially helpful through the direct contact of the members with their various industries in connection with the issuance of War Food Orders and amendments to them. In its turn, OMS was able to assist these industries in solving their problems in connection with such matters as manpower, transportation, prices, maintenance and repairs, and operating supplies.

MARKETING FACILITIES

The Office of Marketing Services worked to solve many problems relating to the physical handling of farm products from the farm to the consumer. The problems involved transportation, storage, the development of market facilities for the assembly and sale of products, and over-all planning and program development in the field of agricultural marketing. The aim was to open up larger outlets for farm products, to reduce distribution costs, to bring about a speedier and more orderly flow of products through the distributive system, and thus to raise the American standard of living.

MARKET ORGANIZATION AND FACILITIES

It is part of the OMS job to plan concentration or assembly markets in producing areas, making certain that there is enough space for storing commodities from the time they are produced until they are consumed, and to improve terminal and secondary markets in consuming areas. Specific tasks to be performed involve the determination of proper locations, designs, and methods of operation for all kinds of market facilities in producing areas and in large cities. This calls for cooperation with farmers and trade groups, city and State officials, and real-estate, civic, banking, and other interests. It requires an intimate knowledge of the marketing of all farm products because the purpose of creating a market is not merely the construction of a facility but also the provision of an efficient method of handling and an orderly method of distributing these commodities.

Individual market plans are drawn to fit the marketing needs and to improve handling methods. During the year detailed plans were worked out for Hartford, Conn.; Miami, Fla.; Peoria, Ill.; and Richmond and Roanoke, Va. The State Director of Markets and the Extension Service in Alabama were assisted in designing the first of several markets in a proposed system of markets for that State. This facility was completed and put into successful operation, and the construction of other markets was begun. The Chamber of Commerce, wholesalers, farm groups, and others in San Antonio, Tex., were assisted in determining what facility was needed there, and in Louisiana OMS worked with the Extension Service, the Experiment Station, and others to improve marketing. Throughout the year cities and rural areas over the country showed interest in preparing plans for market improvement in order that construction based on these plans might be a part of the postwar public works program.

A report was prepared showing how \$100,000,000 could be spent in a postwar public works program for building wholesale fruit and

vegetable markets. These markets, built on an entirely self-liquidating basis, would bring annual savings in distribution cost of about \$30,000,000. OMS worked with the Council of State Governments in planning the legislation needed to charter nonprofit corporations for the purpose of building and operating such improved facilities.

WAREHOUSING

Greatly expanded production, wartime accumulation of foods for movement overseas, fluctuation in the volume of shipments out of the country as a result of war, and price-support programs created many critical warehousing problems. To protect the country's food supply, it continued to be necessary during the year to make sure of adequate warehouse space for food. The greatest problems were with grain storage and cold storage.

COLD STORAGE

Cold-storage holdings in 1943 and 1944 increased much more than food production, and the materials to construct enough additional warehouses to meet requirements were unobtainable. Existing facilities had to be utilized fully. Consequently, the numerous programs that were already under way in the fiscal year 1944 had to be continued and broadened during the first half of 1945. All warehousemen were urged to utilize their space more efficiently. All products not requiring refrigeration were forced out of houses where the space was needed for products of greater perishability. The storage period was limited to 10 months. To make its use more flexible, much warehouse space was made convertible from "cooler" to "freezer." New warehouses were built in critical areas, and OMS continued to inform food handlers throughout the Nation of all unoccupied storage space. Cooperation between OMS and WFA's Office of Labor resulted in the placing of manpower for the commercial cold-storage industry on the production urgency ("must") list. Two food orders regulating the use of cold-storage facilities were combined and expanded in a new order to meet existing needs.

A purely wartime activity of growing importance during the year was the handling of priorities and tax amortization of refrigerated warehouses, ice-manufacturing plants, and car-icing stations. Seven hundred applications were processed. Because materials were scarce, applications were analyzed carefully to make certain that construction was concentrated in areas where the need was greatest and where the facilities would have the widest use. Engineering plans had to be analyzed in order to eliminate from each proposal as much critical material as possible. In many cases it was necessary for OMS to find the materials for the applicant and arrange for financing the project. Where tax amortization was requested, studies of the probable postwar value of the facilities were required.

The basis of OMS work on cold storage was the information collected in its monthly Cold Storage Report. This report contains the results of a Nation-wide survey of the cooler and freezer capacity of every United States cold-storage warehouse. Twice a month each warehouse supplied data on how much of its space was occupied. Once each month figures were supplied on the holdings of each commodity in each warehouse. This information was used, not only as the basis

for cold-storage facility plannings but also by the OPA in formulation of its rationing programs, by the Office of Defense Transportation in regulating the flow of commodities to ports, and by trade and farm groups as market information.

DRY STORAGE

More than a billion and a half dollars' worth of farm products were stored during the year in warehouses operating under OMS supervision, and no storer in any warehouse suffered any financial loss. Thus was preserved the record of no loss to any storer in any federally licensed warehouse since the United States Warehouse Act became effective in 1916. Generally speaking, the number of licenses canceled during the year was offset by the number of new licenses. The year saw a continuation of the licensing of wool warehousemen in Texas wool-producing areas until enough of the total warehouse capacity of that State had been licensed to take care of its annual wool clip.

At the year's end, some 1,340 warehousemen were licensed and some 3,317 licenses were in effect for sampling, weighing, inspecting, and grading the products covered by the act. Actions affecting warehousemen numbered 344, and actions affecting persons servicing warehouses numbered 1,197. In supervision work, approximately 4,590 warehouse examinations were made—an average of 3 inspections per warehouse. (See also table 1.)

TABLE 1.—*Storage capacity licensed under the U. S. Warehouse Act, by commodities, 1944-45*

Commodity	Unit	Licensed capacity June 30, 1944	Licensed capacity June 30, 1945
Cotton-----	Bale-----	10, 648, 785	10, 590, 086
Grain-----	Bushel-----	260, 501, 904	258, 128, 154
Wool-----	Pound-----	78, 706, 700	120, 577, 054
Tobacco-----	Pound-----	116, 150, 000	100, 740, 000
Nuts-----	Ton-----	19, 800	6, 600
Broomcorn-----	Bale-----	16, 750	24, 750
Beans-----	100 pounds---	1, 624, 650	1, 551, 550
Sirup-----	Gallon-----	642, 640	592, 640
Dried fruit-----	Pound-----		
Cold-pack fruit-----	Pound-----	6, 313, 950	6, 313, 950
Canned foods-----	Case-----	3, 575, 900	4, 113, 900
Seed-----	100 pounds---	492, 187	207, 187
Cherries in brine-----	Pound-----	7, 769, 000	7, 235, 000

TRANSPORTATION CONSERVATION AND INVESTIGATION

Shortages of the facilities for moving food and agricultural products (freight cars, manpower, tires, and trucks in good repair) brought increasingly acute problems. Studies were made to forecast the demand for various kinds of equipment, shortages were anticipated, and action was taken to avert problems or have their solutions ready when they appeared. The aim was to conserve existing equipment and use alternative equipment so as to make available equipment do the job. Usually these methods were sufficient, but when they failed, priorities were established for the movement of commodities.

As the year began, the Motor Vehicle Essentiality List, prepared

in cooperation with the War Production Board for the purpose of rationing gasoline for truck use to protect essential services, had to be broadened to include the distribution of all motortruck tires. This required constant adjustment to meet changing conditions. OMS continued to work with WPB and ODT in developing regulations controlling the length of haul and the number of truck deliveries in order to conserve existing truck equipment.

For the first time during the war, an acute shortage of boxcars developed. Severe winter storms in the Northeast interfered so seriously with railroad operations that services were curtailed in that section and boxcar supplies were dislocated over much of the country for several months. Movement of the bumper crop of grain to central western markets, already retarded because of car shortages, was retarded still further. A critical situation resulted in corn of high-moisture content that had to be moved to drying plants before warm weather.

Another problem was to obtain enough boxcars to move grain from the Great Lakes lakeheads and the grain and grain products from lower lake ports. The Army export program set requirements for water movement of grain substantially above that of the preceding year, and caused congestion in port elevators. As a result, a War Food Order was issued to control the elevation of grain from lake vessels into waterside elevators at all United States ports.

Shortages of refrigerator cars became increasingly difficult to overcome. After September, they occurred almost every week in some areas and often in several of the important sections at once. Semiperishables, such as beverages and canned goods, were prohibited for extended periods from shipment in refrigerator cars. It was necessary for OMS to work constantly with ODT, the Interstate Commerce Commission, the Refrigerator Car Lines Advisory Committee, and the railroads, in order to avert serious food losses. Efforts were intensified to increase transportation capacity through increased loadings, speedier car handling, and prompter loading and unloading by shippers. The refrigerator-car fleet continued to diminish. The OMS recommended the building of at least 10,000 additional refrigerator cars as quickly as possible and has worked with the interested groups to determine the best kind of car to build.

The supply of tank cars was adequate for the movement of certain oils, but tank-car movements had to be watched closely to avoid unnecessary hauls and transportation waste.

OMS served as the claimant agency of WFA before the WPB and the ODT for all transportation of farm and food products. It represented WFA in dealings with ICC, OPA, and the Association of American Railroads. It also prepared considerable information for WFA's Office of Transportation.

TRANSPORTATION RATES AND SERVICES

Rate adjustments obtained by OMS saved during the year more than \$150,000,000 in charges for transporting farm products and brought the total savings from this activity since it was begun in the United States Department of Agriculture in 1939 to approximately \$650,000,000. The work affected every farm product and benefited farmers and consumers in every State. Each State was affected by an

average of 32 separate rate adjustments. Included in the savings were several million dollars to the various Government agencies.

Rate actions successfully completed ranged from reductions in the rates on particular commodities between specified points to adjustments covering the entire country on groups of commodities. Fifteen railroad abandonment cases were participated in, and 52 proposed abandonments were studied to determine whether the proper handling of farm products would suffer if the abandonments were permitted. Action was taken to prevent abandonment of 7 branch lines totaling 214 miles. Rates that had been established to make possible the return of used fruit and vegetable containers from terminal markets to producing areas were retained. OMS continued to enforce the so-called 28-Hour Law requiring the feeding, watering, and resting of livestock at intervals while in interstate transportation. Railroad and stockyard officials were informed of inadequate facilities and irregularities in livestock handling and instructed to make the necessary corrections.

OMS supplied rate and economic evidence for two formal hearings before the Interstate Commerce Commission in a case involving a \$5-per-car rental charge for furnishing refrigerator cars for potato loadings in Maine.

A complete investigation by the ICC of the entire wool-rate structure was redocketed. The issues will involve the charges for shipping wool from all States, and will affect the net income of sheep and wool growers the country over.

Many special services were arranged to improve the handling of farm products, to safeguard their quality while in transit, and to extend current marketing customs and practices. Among such projects were a study of the air transportation of perishable products, assistance in developing an improved refrigerator car, a study of protective service against cold, the development of loading rules for watermelons, deficit rules for fruits and vegetables, and the development of extended transit privileges in connection with cotton, eggs, livestock, peanuts, and other commodities.

MARKET ANALYSIS

Other OMS functions are (1) to review generally the Government activities affecting agricultural marketing and their adequacy for protecting farm prices and incomes, (2) to maintain the consumption and assure desirable utilization of farm products, and (3) to improve their marketing and distribution. Examples of specific work done are a study of the status and potentialities of marketing agreements, an analysis of cooperative agreements with the States for the conduct of marketing services, the development and testing of methods for obtaining better information about the changing costs and charges for marketing farm products, and the development of marketing material needed in establishing and handling production goals.

OMS continued to analyze prospective production, consumption, and surpluses at legal support prices during the postwar reconversion period. It studied the problems of price support and surplus disposal that would result, and participated in the development of a number of proposals for dealing with these problems. Estimates of prospective surpluses of major farm products were brought up to date. Analytical work was done on a proposal for national food allotments

and other measures for maintaining consumption and disposing of surpluses. The food allotment plan would, if adopted, guarantee an adequate diet to every family in the Nation and create tremendously expanded markets for such products as fruits, vegetables, dairy products, eggs, and meat.

For use at the third Inter-American Conference on Agriculture at Caracas, Venezuela, in the summer of 1945, OMS prepared a review of problems in agricultural marketing and Government marketing and a program to be recommended to the Conference for developing and improving the marketing of farm products throughout the hemisphere.

COTTON AND FIBER

STANDARDIZATION, RESEARCH, AND TESTING

FIBER AND SPINNING TESTING

The Cotton Service Testing Act of April 7, 1941, authorized the making of analyses of fiber properties, spinning tests, and other tests of the quality of samples submitted by cotton breeders and others. These tests are made on a fee basis.

During the year the volume of samples submitted for testing was as follows: By cotton breeders, 2,814; by cotton merchants, 1,465; cotton manufacturers, 3,214; cotton-improvement associations and others, 670; total, 8,163. Although the number of applicants for service testing was slightly less than during the previous year, the number of individual requests and of samples was considerably greater. An important development was the substantial increase in the number of tests requested by cotton merchants and manufacturers. Some merchants and manufacturers have adopted the practice of submitting for fiber-strength tests, test samples from a definite percentage of the bales from each lot of cotton sold or bought, in order to supplement the customary classification of the cotton according to grade and staple length.

Results of the annual variety tests, participated in by the Bureau of Plant Industry, Soils, and Agricultural Engineering and various State agricultural experiment stations, of leading commercial and new varieties and strains of cotton—including 216 test lots—were published under the titles, "Results of Fiber and Spinning Tests for Some Varieties of Upland Cotton Grown in the United States, Crop of 1944," and "Results of Fiber and Combed-Yarn Spinning Tests of Some Long-Staple Cotton Grown in the United States, Crops of 1941-44."

A study conducted in cooperation with the Texas Agricultural Experiment Station involved the making of complete fiber and spinning tests on 26 lots of cotton, including hand picking, hand snapping, machine stripping, and mechanical picking. The tests were designed to determine the effect of these various methods of harvesting on the spinning quality of cotton of different varieties and staple-length groups.

COTTON-QUALITY AND STANDARDIZATION RESEARCH

Progress was made in connection with a study of relationships between various physical properties of cotton fibers and processing performance. Results of the first segment of this study were published

in March 1945 under the title "Relationships Between Properties of Cotton Fibers and Strength of Carded Yarns." A second segment, intended to provide information about cotton-fiber properties important in the manufacture of tire cord, the largest single outlet for cotton, was published in June 1945 under the title "Relationships of Cotton Fiber Properties to Strength and Elongation of Tire Cord."

A preliminary study was made of the comparative significance of data concerning fiber tensile strength and length as obtained by means of alternative testing equipment.

Fiber length arrays made as a basis for the purchase of cotton for use as standard types for staple length totaled 639. The selection of all cotton for use in the official standards is based on laboratory tests. Tests of staple types returned by members of the cotton trade totaled 48.

The annual color survey of the cotton crop of the United States, after discontinuation for 2 years, was resumed. Color surveys indicate trends of color changes in the crop in relation to color in the official cotton standards. A random sample from each of 19 classing offices—a total of 5,853 samples—was measured for color. A new development was the beginning of a study of the color changes that take place in cotton stored under various conditions.

A summary of OMS work on color measurement and its application to the grading of agricultural products was prepared and scheduled for publication. It covers the results of work over a period of years in the development of instruments and methods for measuring color scientifically, and includes instructions and data for applying color measurement.

MARKETING RESEARCH

Collection of data in a study of the principal United States central cotton markets was completed. Markets covered included 5 of the 10 markets designated as bona fide spot-cotton markets under the Cotton Futures Act. The purposes of the study were to evaluate (1) trends in the assembling, concentration, and distribution of raw cotton from the standpoint of effective integration of public services in marketing with commercial marketing procedures, and (2) marketing methods and procedures in the central cotton markets in terms of their influence on marketing costs.

Data concerning the spreads between prices received by cotton growers and the prices prevailing in the central cotton markets, as well as between farm prices and prices paid by cotton manufacturers, were brought up to date to include the 1943-44 season.

Beginning with the 1932-33 cotton season, data have been compiled annually on costs of physically handling cotton in marketing channels, such as of receiving at warehouses and of sampling, weighing, marking, storing, and compressing. These data were brought up to date to include the 1944-45 season.

Work was begun on a study to provide definite quantitative data on the relative importance of cotton variety as an indicator of spinning performance. The study includes tests of samples of cotton of various grade and staple combinations of the principal improved varieties grown in different localities throughout the Cotton Belt. It is expected to result in providing a more complete index of spinning value than is now used in transactions in raw cotton.

Development work was continued on automatic mechanical equipment for sampling cotton bales during the ginning process, in order to provide a more satisfactory sample than is obtainable through the present practice of cutting samples from completed bales. Equipment for the automatic extraction of the sample during ginning had been perfected, but automatic processes of packaging and marking were still to be completed.

An economic study of the optimum size and organization of a cotton-gin plant from the standpoint of economy in performing ginning and related services, begun during the previous year, was continued and expanded. In 1944, ginning in a selected area of Mississippi had been investigated cooperatively by OMS and the Mississippi Agricultural Experiment Station. In 1945 the study was extended, with the cooperation of the Oklahoma Agricultural Experiment Station, to a selected area in Oklahoma.

GINNING AND PACKAGING RESEARCH

In cooperation with the Delta Experiment Station, tests were made involving special field-plot planting, experimental cleaning and ginning operations, and the quality testing of fiber and cottonseed. The tests were intended to show the technical and economic possibilities of mechanized cotton production and of subsequent processing and marketing operations.

An extensive series of cleaning and extracting tests was conducted to determine definitely the limits of cleaning machine-picked seed cotton.

The harvesting test materials studied during the year represented four varieties of cotton especially planted in plots to provide hand-picked and machine-picked cotton (defoliated and undefoliated). In another series of studies, the effect on lint and cottonseed qualities of defoliation from the dusting of cyanamide on the cotton plants at different boll-development periods was determined by the Delta Experiment Station in four replications.

A horizontal drum-type cottonseed drier and cleaner, equipped with two drums that were long enough to provide adequate exposure for effective drying, was built and tested.

A new design of press-box dog mechanism, recently developed at the U. S. Ginning Laboratory to avoid the formation of dog ridges in gin bales, was observed under commercial operating conditions and was found to be effective in distributing the cotton uniformly through the bale box. Detailed plans for the mechanism were set forth in the leaflet, *Preventing Cotton-Press Damage*.

Five types of devices for cleaning mechanically picked cotton were developed and tested, and the most effective of them was integrated with the ginning equipment of a three-stand commercial-type gin at the laboratory.

Laboratory test work on packaging had to be abandoned temporarily because of a laboratory gin-plant fire, but field observations of standard-density gin-press performance were continued. Two reports—one on the packaging of America cotton and methods for its improvement, and one on gin-standard-density presses—were sent to the printer.

Preliminary studies were begun at the Stoneville, Miss., laboratory to develop a way to determine the grade of individual lots of cotton-

seed at the gin at the time of sale by farmers. Laboratory facilities were provided for determining the content of oil, nitrogen, free fatty acid, moisture, foreign matter, and residual lint by standard laboratory methods.

Preliminary studies were conducted to provide information on the effect of variety and growth conditions on the quantities and qualities of the products obtained from cottonseed and the possible relations between various physical properties of the seed and the outturn of oil, meal, and other products.

CLASSIFICATION AND INSPECTION

A feature of the year was the greatly increased demand for cotton-classing service. Classing work under the Cotton Standards Act, the Cotton Futures Act, the Smith-Doxey Act, the Grade and Staple Statistics Act, and in connection with the cotton programs of the Commodity Credit Corporation and other agencies involved samples representing more than 8 million bales of cotton—more than two-thirds of the 1944–45 American cotton crop. Table 2 summarizes these activities.

Distribution of the standards for grade of American cotton and linters totaled 2,315 boxes, as compared with 2,300 during the previous year, and distribution of 7,486 staple-length types as compared with 6,259. The sale of practical forms or copies of the grade and staple standards brought \$11,011.25, as against \$13,702.25 in 1944. About 140 bales of cotton were purchased to prepare the practical forms.

The volume of cotton samples submitted for classification and certification under the Cotton Futures Act was 61,318 bales, a large increase over the 17,041 samples submitted in fiscal year 1944. Reviews numbered 27,699, as compared with 9,012. Indications were that a considerably larger volume of cotton would have been submitted if serious congestion and manpower shortages at delivery points had not made it impossible on many occasions for trade members to have cotton officially sampled in time for classing, certification, and delivery during certain active delivery months.

Bales withdrawn from the certificated stocks at future-delivery points totaled 40,313, and by the end of the year bales in the certificated stocks at these points totaled only 11,821. Fee collections amounted to \$19,585.15, as against \$7,020.69 during the preceding year.

Under provisions of the Cotton Standards Act samples representing 3,515,743 bales of cotton were classed. Notable was the fact that samples representing 2,475,283 of these bales were CCC loan-and-purchase cotton. During the preceding year CCC loan classifications totaled 1,632,910. The increase resulted largely from the new purchase program that CCC made available to farmers in the fall of 1944 as an additional price-support measure.

Classifications for members of organized cotton-improvement groups under the so-called Smith-Doxey Act (April 13, 1937) numbered 4,069,117; they were 3,350,622 during the year before. When the 1944 purchase program was announced, CCC made the acceptance of the certificates issued under the Smith-Doxey Act conditional upon the cutting of samples by bonded samplers or by warehousemen whose plants were approved for storing loan cotton. During the year 1,182 samplers qualified for bonds.

TABLE 2.—*Cotton classification activities under different laws (not including samples classed for supervision purposes)*

Item	Samples classified during fiscal year—		
	1943	1944	1945
Cotton Futures Act:	<i>Number</i>	<i>Number</i>	<i>Number</i>
Original certifications-----	36, 441	17, 041	61, 318
Reviews-----	15, 203	9, 012	27, 699
Cotton Standards Act: Public classing service and miscellaneous-----	349, 493	337, 181	528, 624
Commodity Credit Corporation:			
Loan cotton-----	1, 228, 647	1, 632, 910	2, 475, 283
Sales program, etc-----	354, 018	87, 088	303, 659
Lend-lease (formerly referred to as Federal Surplus Commodities Corporation classing)-----	661, 244	321, 041	193, 220
Federal Penitentiary, Atlanta, Ga-----	26, 098	13, 105	14, 957
Smith-Coxey Act of Apr. 13, 1937-----	3, 567, 095	¹ 3, 350, 622	¹ 4, 069, 117
Grade and Staple Statistics Act-----	565, 637	516, 264	430, 301
Total classed by employees of Office of Marketing Services---	6, 803, 876	6, 284, 264	8, 104, 178
Reported classed by licensed classers under Cotton Standards Act-----	7, 028, 218	8, 863, 216	² 11, 085, 619
Grand total-----	13, 832, 094	15, 147, 480	19, 189, 797

¹ Classifications under this act have been acceptable as a basis for Commodity Credit Corporation loans.

² These figures include ordinary bale-by-bale classifications, samples classed in assembling cotton into even-running lots, and classifications of cotton previously assembled into even-running lots.

Other important classing jobs were the grading and stapling of samples representing 300,080 bales of cotton that trade members had purchased from CCC, 193,220 bales purchased for lend-lease purposes, and 14,957 bales used in the textile mill at the Atlanta Federal Penitentiary.

Because privately employed licensed classers were not permitted to class cotton officially for CCC programs, and because many classers were in the armed forces, the trend of recent years toward fewer license renewals continued. Only 475 licenses (including renewals) were issued, as compared with 528 in fiscal year 1944. Examinations of applicants for licenses under the Cotton Standards Act numbered 45.

During the 1944-45 season, the War Production Board required 80 percent of the cotton linters produced by the cottonseed crushing mills to be delivered to CCC for distribution into consumption channels related to the war effort. The crushing mills were requested to send samples regularly to the Board of Cotton Linters Examiners for advice on the suitability of their production for war purposes. Where the linters were off quality, a copy of the Board's findings was sent to WPB for further action. Reports were issued on 7,045 samples of linters so submitted.

Form A memoranda, showing classification of linters samples submitted to the Board, were issued on 21,208 samples. Twenty-seven expositor types and 130 copies of the standard grade boxes were issued.

Seventy-five classifiers were examined and licensed. These classi-

fiers certify the classification of samples or bales of linters submitted to them for the purpose. Check samples on each certificated lot, required to be sent to the Board, totaled 1,512, which represented approximately 225,000 bales.

Various Government agencies submitted 594 cotton-linters felts for the Board's inspection to determine their conformity with contract specifications.

During the year licensed cottonseed samplers inspected and sampled, and licensed cottonseed chemists analyzed and certificated, the grade of 161,563 lots of cottonseed that had been sold for crushing purposes during the 1944-45 season. It is estimated that these samples represented 3,800,000 tons of cottonseed out of 4,310,000 tons purchased. To supervise the sampling, analysis, and grading of cottonseed, 458 cottonseed samplers' licenses were renewed and 121 new licenses were issued. The licensed samplers were stationed at 355 cottonseed crushing mills and purchasing stations. Licenses were issued to 25 cottonseed chemists.

Appeals received from the grades certified by licensed chemists numbered 215. As a result of calculation errors, or of errors of analysis, 4 grades were lowered and 62 grades were raised. The original grades were sustained in 149 cases.

OMS cooperated with CCC in its soybean program by drafting its rules to govern the approval of soybean chemists. For this work OMS recommended 22 licensed cottonseed chemists and 29 other chemists outside the Cotton Belt. Other assistance to CCC included the handling of about 15,000 samples of soybeans for check analysis and other purposes.

OMS representatives attended a conference attended also by representatives of growers, millers, and manufacturers of hemp line and tow, and of the Commodity Credit Corporation, the Bureau of Plant Industry, Soils, and Agricultural Engineering, and the Navy Department at which it was agreed that official standards for hemp line and tow for use on a permissive basis were needed and that the standards adopted in 1942 should be revised.

IMPROVEMENT GROUPS

The Smith-Doxey Act provides a cotton-classing and market news service, now 7 years old, for farmers organized to promote the improvement of cotton. Growth of this service is shown in table 3.

During the year these services were furnished to 2,410 cotton-improvement groups having a farmer membership of 321,284, or 14 percent more members than in the preceding season. These farmer members received classification and market news service on more than 4 million samples, or 22 percent more than in 1943-44 and about 15 percent more than in the previous record-high year.

The cotton-improvement planting-seed program is intended to encourage the growth of a single improved variety of cotton by all growers in large areas where growing conditions are uniform, in order to improve cotton quality, increase yields per acre, and standardize production by the elimination of inferior varieties. During the year payments were made on about 13,413,000 pounds of improved cotton planting seed under this program. The payments were made through cotton crop-improvement associations in 5 States to nearly 17,000

farmers. The volume of improved seed delivered under the program in 1944 more than doubled that in 1943. Extent of participation is shown in table 4.

TABLE 3.—Growth of cotton classing and market news service for farmers organized to promote the improvement of cotton

Season	Groups served	Members	Samples classed
	<i>Number</i>	<i>Number</i>	<i>Number</i>
1939-40-----	918	64,399	265,090
1940-41-----	1,573	128,216	1,530,764
1941-42-----	2,511	278,782	2,520,083
1942-43-----	2,465	281,100	3,567,095
1943-44-----	2,259	281,493	3,350,622
1944-45 ¹ -----	2,410	321,284	4,069,117

¹ Preliminary.

TABLE 4.—Summary of results of cotton-improvement planting-seed program, by States, 1944

State	Growers participating	Seed delivered	Acreage planted ¹	Production ¹
	<i>Number</i>	<i>Pounds</i>	<i>Acres</i>	<i>Bales</i>
Florida-----	1,641	287,936	11,518	4,217
Tennessee-----	3,743	1,165,310	46,612	39,396
New Mexico-----	927	979,537	39,182	39,346
Oklahoma-----	3,252	1,308,890	52,357	22,454
Texas-----	7,154	9,671,752	386,870	142,446
Total-----	16,717	13,413,425	536,539	247,859

¹ Estimated on the basis of 25 pounds of seed per acre and average yields per acre.

COTTON DIVERSION

Two cotton-diversion programs were carried on—for the manufacture of cotton insulation and for the processing of cotton burs into feed and fiber. The insulation work utilized low-grade, short-staple cotton of which there was a large surplus, and the bur work concerned the development of a market for a material that has been of little value to farmers.

During the year the insulation program, which was begun in 1940, began to make progress in the manufacture of cold-storage lockers and refrigerated freight cars. Cotton insulation was reported to be successful even in maintaining proper temperatures for the shipment of blood plasma by air to the Pacific battle areas. Specifications for cotton insulation were made more rigid by the added requirement that the material must meet a flame-crawl test. Plants manufacturing insulation under the Government program were located in seven States and produced approximately 8 million pounds of insulation.

OMS technically assisted participating manufacturers in the method of treating cotton insulation to make it meet requirements in certain fields of use. A series of analyses of cotton-insulation production costs, made under manufacturing conditions, was begun. The results

should be useful in determining the amount of incentive payments required in future programs.

At a public hearing in Chicago before the Consolidated Freight Classification Committee, an OMS representative successfully urged against a prohibitive increase in the freight rates on cotton insulation.

Under the bur program, designed to develop outlets for cotton burs, incentive payments were offered for the processing and sale of cotton-bur feed for livestock. At the same time, the program required (without such payment) that specified tonnages of cotton-bur fiber residue resulting from processing the feed were to be processed into approved uses or sold and delivered to eligible purchasers.

Payments were to be made on not more than 2,000 tons of cotton-bur feed, in the processing of which at least 5,000 tons of unprocessed cotton burs were to be used. Of the difference of 3,000 tons between burs used and feed produced, not less than 1,400 tons of fiber residue were to be diverted or sold for diversion into approved uses. The payment rate was based on the protein content of the cotton-bur feed produced.

The manuscript was prepared for a booklet, Cotton Insulation, which was privately printed and distributed without cost to the Government. Another publication issued was Domestic Cotton Surplus Disposal Program, a review of 12 types of surplus-cotton-disposal activities conducted by the Department of Agriculture since 1932. It outlines for each type the background and descriptions of the programs, quantity of cotton diverted, cost of diversion, and the outlook for each disposal method.

MARKET NEWS

Cotton market news reports on the market situation and prices were released weekly from Atlanta, Memphis, Dallas, Bakersfield, and Washington. Cottonseed market news reports showing general market information and the quality and prices paid to farmers by counties were released weekly during the active season from Atlanta, Memphis, and Dallas. Released from Washington were a weekly market news report on cotton linters, and a monthly report, Cotton Price Statistics.

OMS continued to prepare and release estimates of the grade and staple length of cotton in the crop and carry-over, and to analyze these figures.

Late in the 1944-45 season, the regulations of the Smith-Doxey Act were revised to require cut-gin samples by bonded samplers. The regulations were also modified to simplify applications required of the improvement groups and to clarify the responsibilities of State committees in recommending groups for approval, the changes to become operative in the 1945-46 season.

One problem in market news work has always been to provide farmers with more understandable price information. As a step in this direction during the year cooperation was arranged with the State extension services in North Carolina, South Carolina, Georgia, and Alabama to place CCC loan values in cents per pound on form-1 cotton-classification certificates received by members of cotton-improvement groups. The service took usable price information directly to farmers and increased their bargaining power.

DAIRY PRODUCTS, EGGS, AND POULTRY

Major emphasis of all the OMS dairy programs during the year was on plans and actions aimed at encouraging the maintenance of a higher level of milk production and the utilization and distribution of this milk and its products according to war needs. High lights of the principal developments were:

1. In the face of farm-labor shortages and other production problems and aided by direct dairy-production payments of about 450 million dollars, a record of 121.2 billion pounds of milk was produced.

2. The total supply of milk products for human food was further increased as more farmers changed to the delivery of whole milk instead of farm-separated cream, and thus was made available for human food the equivalent of an additional 400 million pounds of nonfat milk solids previously retained on farms as skim milk.

3. Changes from the previous year in milk utilization included further slight increases in civilian consumption of fluid milk, substantial increases in the production of Cheddar cheese, evaporated milk, dry whole milk, and dry ice-cream mix, and a decrease in the production of creamery butter.

4. Distribution controls over some commodities were continued. These controls, including War Food Orders and rationing, were adjusted to seasonal changes in production and Government procurement operations so as to accomplish as even a distribution of civilian supplies as possible throughout the year and to aid orderly procurement of supplies to meet military and other needs.

5. Liberation in Europe increased the need for dairy products. Expansion in whole-milk receiving and processing facilities continued during the year. The large-scale shift by farmers from deliveries of cream to whole milk, however, resulted in problems of handling and processing all the available whole milk or skim milk in some areas, particularly at the seasonal production peak. OMS worked with the War Production Board and equipment manufacturers to obtain delivery of equipment to meet critical needs and thus avoid significant loss of milk. OMS also worked with other Government agencies and the industry on problems involving labor for processing plants, materials and supplies, transportation, and the diversion of milk among plants. Because a further large-scale shift by farmers from cream to whole-milk deliveries would likely have resulted in supplies of whole milk in excess of plant-processing capacity and in a further diversion of butterfat from butter production, on April 1, 1945, the production-payment rates to farmers for whole milk as against butterfat in cream were substantially equalized, an action intended to slow up the shift from cream to whole-milk deliveries.

During the year a large proportion of the total milk supply was consumed in fluid milk and manufactured in dairy products other than butter, whereas a decreased proportion was made into butter. Civilians received more whole-milk products and less butter. This developed mainly from prices relatively lower for butter (plus the roll-back subsidy on butter) than for many other dairy products and milk uses. Other causes were production payments to farmers that were larger for whole milk than for butterfat, and the impracticability of completely controlling all use of milk and cream. Specific actions to check the decline in butter production included continuance of

limitation orders on other uses of milk and a substantial increase in production payments to farmers for butterfat in farm-separated cream.

SPECIAL PROGRAMS

DAIRY-PRODUCTION PAYMENT PROGRAM

Direct payments to individual milk producers on milk and butterfat (instead of price-ceiling increases), begun in October 1943, were continued throughout the year in order to encourage producers to maintain a high rate of milk production.

The rate structure was maintained with the same regional differentials in the rates on whole milk as had been established previously. In the Midwest, the basic rate was 35 cents per hundredweight of whole milk for the summer months of 1944, 60 cents for September 1944 through April 1945, and 25 cents for May and June. Rates for other areas ranged from 10 to 30 cents per hundredweight higher. The payment rate on butterfat, the same all over the country, was 6 cents per pound during the summer of 1944 and 10 cents from September 1944 through March 1945. The rate was 17 cents per pound in April and 10 cents in May and June of that year. This action was taken to discourage further diversion from deliveries of farm-separated cream to whole milk and to comply with congressional action regarding equalization of milk and butterfat rates.

During the fiscal year, payments amounting to about 450 million dollars were made to nearly 2 million producers. This compares with about 224 million dollars paid to about the same number of producers during the 9 months from the beginning of the program through June 1944. Payments were made through county AAA committees for the Commodity Credit Corporation under policies and provisions recommended by OMS.

CHEDDAR-CHEESE PRODUCTION PAYMENTS

Special payments by the Commodity Credit Corporation to manufacturers of Cheddar cheese were continued during the year. These payments enabled the factories to pay prices for milk necessary to maintain the increased production of cheese for military, lend-lease, Red Cross, and civilian uses. The payments continued, at the basic rate of $3\frac{3}{4}$ cents per pound subject to adjustment for the moisture content of the cheese, to approximately 1,870 factories on 827 million pounds with a net expenditure of approximately \$18,100,000.

The payments were started in December 1942 in lieu of an increase in ceiling prices. Later, ceiling prices on Cheddar cheese sold to Government agencies were increased by 3.8 cents per pound, which eliminated the necessity for payments on this cheese. The program was revised so that payments would be made on only such cheese as ultimately entered civilian outlets. Most cheese is marketed through assemblers who grade, sort, and assemble it into carlots or process it, and at the factory level a determination of its final disposition is substantially impossible. Therefore, payments were continued on all Cheddar cheese produced by the factories. The equivalent of the payment on cheese ultimately sold to Government agencies at the higher ceiling prices was recovered by collection of 3.8 cents per pound from manufacturers and assemblers making such sales. Total payments

during the year approximated \$31,900,000, and recoveries were \$13,800,000.

The program was operated through the Dairy Products Marketing Association, which received monthly applications and paid the applicants in accordance with an agreement with the Commodity Credit Corporation and directions from OMS acting as the CCC's program administration agent. More than 21,000 applications, with supporting evidence of milk receipts and utilization, cheese production, moisture content, and the distribution of payments to producers, were received and analyzed during the year.

The only significant revision of the program was the change in the payment rate for low-moisture cheese, effective January 1, 1945, from 4¼ cents on extremely low-moisture cheese to 4 cents on all low-moisture cheese.

MILK-PROCESSING PROBLEMS

Milk-receiving and processing facilities were expanded further during the year. It was necessary to continue to review all priority applications in order to limit the expansion and replacement of facilities to areas where milk production was increasing, where farmers were shifting from cream to whole-milk deliveries, and where existing facilities were inadequate. Nearly 1,000 priority applications were handled.

Most of the expanded facilities were for drying milk. They included about 11 new drying units and specific items of equipment to enlarge many others. Eighteen plants made the changes necessary for the manufacture of dry whole milk and dry ice-cream mix. All of the 25 milk-drying facilities and 1 Cheddar-cheese facility developed under the lend-lease financing program were in operation before the end of the year.

Wartime programs have called for expansion of the processing of most dairy products. This expansion program has brought problems of increased requirements for transportation facilities, containers, labor, sugar, and fuel. Cooperation with the trade and various Government agencies toward the solution of these problems has been a part of the OMS job during the fiscal year.

FLUID-MILK PROGRAMS

Principal OMS activities concerning fluid-milk marketing and distribution were of five types. One of these is discussed later in this section under WFO 79. The others are discussed under the four following subheadings.

MILK MARKETING AGREEMENTS AND ORDERS

During all or part of the year 25 marketing agreement and order programs for fluid milk were in effect. Approximately 121,000 producers, with an output of about 13 billion pounds of milk worth almost 436 million dollars, were affected.

A number of hearings were conducted during the year to consider the issuance of new programs or amendments to existing programs. A new order (69) for suburban Chicago became effective September 1, 1944. The hearing was held and all the work was completed in connection with new programs for the Dayton-Springfield, Ohio, area (order 71, to become effective July 1, 1945) and for an area in West

Virginia, Kentucky, and Ohio (the Tri-State order, expected to become effective August 1, 1945). A marketing order, effective October 1, 1944, was issued to regulate the handling of milk in the Clinton, Iowa, marketing area and was the first to provide for separate pricing of the component parts of milk.

A significant amendment to the New York order (to become effective August 1, 1945) provided for (1) a new method of determining which plants in the six-State New York milkshed shall participate in the market-wide equalization pool and (2) a specific procedure for issuance by the market administrator, with the approval of the Secretary of Agriculture, of rules and regulations to effectuate the terms and provisions of the order relating to the classification of milk.

The new pool-plant provision in the New York order recognized as an economic problem the determination of the milk to be under regulation and placed the final responsibility for the determination upon the Secretary. It was also an attempt to recognize the handlers' obligation to supply the marketing area properly by making continued pool participation contingent upon the handlers' performance. Mere approval by health authorities was no longer enough to guarantee pool participation.

A hearing on a proposed new program for the Columbus, Ohio, marketing area was held in January and reopened on June 20, 1945, to receive additional evidence. Also pending was action on a hearing to consider a marketing agreement and order program for the Twin Cities (Minneapolis-St. Paul) marketing area and on hearings to consider amendments to the Washington, D. C., and the Cincinnati orders.

As in other recent war years, provisions in several orders for seasonal price reductions were suspended to encourage continued high production in the summer months.

Handler compliance with milk-marketing orders continued to be excellent in all markets. Fewer than 15 enforcement proceedings were instituted. Fewer than 50 enforcement proceedings were pending before the courts on June 15, and a majority of these, already adjudicated, were completed except for satisfaction of judgments. More than 25 injunctions or court orders were issued against noncomplying handlers.

Approximately 30 petitions filed under Section 8c (15) (A) of the Agricultural Marketing Agreement Act of 1937 were pending before the Secretary on June 15. Of the 20 petitions the Secretary acted upon, the relief requested by the petitioners was denied in all but 2 cases. The petitions challenged interpretations of the milk-marketing orders in general and in several instances challenged the legality of provisions that they included.

Handlers instituted six court cases under Section 8c (15) (B) of the act to obtain a court review of rulings by the Secretary on petitions filed under Section 8c (15) (A). On June 15, seven review proceedings were pending before the courts. Of the nine court decisions rendered, the Secretary's rulings were sustained in six.

1. In *Bailey Farm Dairy Co. et al. v. Jones et al.* the District Court at St. Louis sustained the legality of certain amendments to the St. Louis order. Under the amended order St. Louis handlers were required to give credit up to 95 percent of their class I sales to local producers before allocating any milk shipped in from outside sources to class I use.

2. In *Wawa Dairy Farms, Inc. v. Wickard*, the Circuit Court at Philadelphia upheld the validity of certain location differentials included in the Philadelphia order.

3. An important decision involving the New York order was rendered in the case of *Grandview Dairy, Inc. v. Jones et al.*, on June 11, 1945. In this case the District Court sustained the action taken by the market administrator in denying market service payments with respect to milk moved through a pipe line between two buildings of this handler.

MILK PRICE-CEILING ADJUSTMENTS

Prices to producers for milk for fluid use continued to be the only prices for milk (or cream) at the producer level subject to price-ceiling control. A continuing problem was the level of fluid-milk prices to producers in many local markets, particularly those around which milk and cream are sold for both fluid and manufacturing use.

For the United States as a whole, the average price paid to producers by condenseries for 3.5 percent milk increased from \$1.92 per hundredweight in April 1942 to \$2.63 in April 1945. The price received by producers for all milk sold at wholesale (average test) increased from \$2.41 per hundredweight to \$3.14 between April 1942 and April 1945. The average price paid by dealers for 3.5 percent milk for city distribution as milk and cream was \$2.75 per hundredweight in April 1942, and \$3.26 in April 1945. Between April 1942 and April 1945, the condensery price had increased by 71 cents per hundred pounds, the producer price for all milk by 73 cents per hundred pounds, and the price for milk for city distribution by 51 cents per hundred pounds. In individual markets there were many cases of even greater discrepancies between prices. A substantial number of market-price adjustments remained to be made at the end of the year.

FLUID-MILK PAYMENT PROGRAMS

The programs of special subsidy payments to fluid-milk handlers in certain cities were continued and their coverage was extended to one additional city market—Fort Wayne, Ind. The purpose was to enable milk handlers to pay higher prices to producers without exceeding the price ceilings for milk established by the Office of Price Administration. These higher prices to producers were required in order to assure production of adequate supplies of milk in the face of increases in farm wages and other costs and the competition of alternative lines of farm production.

Payments under the programs were made by the Commodity Credit Corporation through the market administrators under the milk marketing agreement and order programs. A total of 13 milk-payment programs affected more than 500 handlers. Total payments averaged about 1 million dollars, applicable to about 400 million pounds of milk each month.

LOCAL SHORTAGE AND SURPLUS PROBLEMS

The year's upward trend milk production was especially pronounced in a number of the fluid milksheds in the Northeast and the Middle West. For example, the Boston milkshed showed an increase of 8.2 percent over the previous year and the Kansas City milkshed an increase of 23.4 percent. These increases became pronounced in the fall of 1944 when the unusually favorable weather conditions prevailing

over most of the dairy sections prevented a recurrence of the supply-allocation problems that had arisen during the previous year. The increases continued through the spring of 1945, and it was necessary not only to design special programs for handling the temporary surpluses but also to increase the quotas under most limitation orders so as to facilitate full use of the milk.

Milk waste was held to a minimum, although small quantities of skim milk were wasted in some sections despite the fact that quotas on cottage cheese and other skim-milk uses were completely removed during the peak of the flush.

Long-distance shipments of whole milk and high-quality cream and condensed skim were continued in order to help satisfy heavy demands in many of the southern markets. However, milk supplies during the year were generally more nearly adequate than during the 2 previous years, and in several individual markets organized producer groups had begun to consider postwar surplus problems.

POULTRY PRODUCTS

The poultry and egg industry experienced the extremes of production and marketing conditions. As the year began, the industry was just beginning to overcome the most serious surplus conditions it had ever faced. In late November, egg prices became firm; and for the rest of the year they were at or near ceiling levels, and egg shortages occurred and often became acute.

The shortages made it impossible for war agencies to procure their requirements during the months of peak production. Use of priorities was extended, and as a result the procurement programs for shell eggs were substantially on schedule at the end of the year. It was necessary to serve priorities upon a large number of dealers all over the country in order to accomplish this result.

War agencies also had difficulty in procuring enough dried eggs during the last half of the fiscal year. Substantial stocks of dried eggs of the War Food Administration were transferred to war agencies, which were permitted to issue priorities for large quantities of frozen eggs. This program helped, but at the end of the year procurement of both dried and frozen eggs was behind schedule.

POULTRY

Twenty percent fewer chickens were raised in 1944 than in 1943. War agencies competed with civilian suppliers in chicken procurement. In December, civilian consumption of poultry meat increased as a result of the growing shortage of other meats. From March through June, laying flocks were being sold at substantial premiums above ceiling prices for hens.

On December 11, WFO 119 was issued. It set aside for military procurement 100 percent of the poultry produced in four major commercial broiler areas and provided several million pounds of dressed poultry weekly.

During the year, canned boned chicken was difficult to procure. In the early fall, the Army announced requirements of 70 million pounds of canned boned chicken, the satisfaction of which called for the processing of 200 to 250 million pounds of dressed chicken. Offers to purchase this quantity in the open market had failed because ade-

quate poultry supplies were lacking and canners wished to continue producing certain canned poultry for their civilian trade. Their failure to acquire sufficient poultry stocks in the fall of 1944 also made it impossible for them to make processing contracts.

This condition resulted in the issuance of WFO 125, which provided that no poultry could be canned except for Army purchase and according to Army specifications. Moreover, the order set aside for such canning all stocks of eviscerated poultry in cold storage. The result was the canning, from February through June, of more poultry than ever before in industry history.

TURKEYS

In the fall of 1944, although the United States production of turkeys reached the all-time high of 549 million pounds, there were not enough of them to meet the large consumer demand.

The shortage had been anticipated. On July 11, 1944, WFO 106 was issued which set aside for military procurement all turkeys produced in the major turkey-raising areas. The order made it possible to provide our armed forces with turkeys for the holidays.

Turkey-breeding hens are normally sold at the end of the egg-laying season in May and June. It was apparent that civilian demand during the spring of 1945 would be so great as to keep the Army from obtaining enough breeder hens for use in its canning programs. So, on April 4, WFO 106 was again invoked in order to channel to the Army as many breeder hens as possible. The program was successful, but by the end of the fiscal year procurement was somewhat behind schedule because the large demand for poultry had caused farmers to retain turkey hens for egg-laying purposes longer than usual. (See also Turkeys on p. 35.)

FOOD-ORDER ADMINISTRATION

Thirteen basic War Food Orders and additional supplementary orders regulated the production and sale of fluid milk and cream, manufactured dairy products, and poultry during the fiscal year. Their common aim was to divert production directly or indirectly to more important uses for these products. Six orders were terminated and three new ones were added.

BUTTER

WFO 2, originally effective February 1, 1943, required most persons who manufactured creamery butter to set aside a specified percentage of their production for delivery to designated military, lend-lease, and war-service agencies. The required percentages varied during the year from zero during the winter months to a high of 55 percent during May and June.

Changes during the year included a redefinition of the persons subject to the order, so as to eliminate manufacturers whose volumes had decreased, and the addition of provisions for reauthorization of receivers.

Approximately 90 percent of butter set aside during 1944 moved from the manufacturer to designated agencies through authorized receivers. The 217 firms authorized to handle set-aside butter in 1944 included nearly all the established butter handlers.

Petitions for relief from hardship were filed by 387 persons, and 96 exceptions were granted.

FROZEN DAIRY FOODS

WFO 8, which restricts the utilization of milk and frozen-dairy foods and mix, was changed from a milk-solid to a milk-fat basis on March 1, 1945. The order affects approximately 20,000 processors who manufacture more than 490 million gallons of frozen dairy foods.

Provisions restricting the milk-solid content of ice cream and the percentage of milk solid to be used in frozen products other than ice cream were deleted from the order on March 1, 1945.

Flexibility in the use of monthly quotas has enabled ice-cream processors to use a larger percentage of the annual supply of milk during the flush season. An amendment issued May 15, 1945, provided that processors might increase their utilization of milk fat from 65 to 75 percent of that used in June 1942.

During the year, 284 investigations of reported violations were completed; 222 audits were made; 46 cases were recommended for criminal action, 12 for injunctions, and 10 for other civil action. Suspension orders relating to WFO 8 numbered 2.

MILK-MARKETING ECONOMIES

WFO 11, providing for a number of milk-marketing economy measures designed to simplify milk-handling operations and to reduce marketing costs for fluid milk, continued unchanged.

CREAM

WFO 13 prohibits the sale of heavy cream. It was amended on February 6, 1945, to establish quota control over the production of "filled cream," which includes various blends of light cream and vegetable oils, sold largely as a substitute for whipping cream. The amendment permits any manufacturer of filled cream to utilize milk solids up to 75 percent of utilization in a base period. The base period is May 1944 for handlers who produced filled cream during that month and who produced less than 100 gallons during any calendar month from April 1943 through March 1944. The base period is from April 1943 through March 1944 for all other handlers.

CHEDDAR CHEESE

WFO 15, a set-aside program for Cheddar cheese for war agencies, became effective in February 1943. During the fiscal year it was changed from month to month in its set-aside percentages, with the aim of maintaining a fairly constant civilian supply. Between 400 and 425 million pounds of the product—close to 50 percent of the year's total production—were set aside.

NONFAT DRY MILK SOLIDS

WFO 54, the set-aside order for nonfat dry milk solids, applied only to manufacturers of spray-process nonfat dry milk solids. After September 1944, the percentage of production required to be set aside varied from 40 to 75 percent.

Roller-powder manufacturers were required to set aside 50 and 35 percent respectively of their production during July and August 1944.

Beginning September 1, however, and throughout the rest of the year, the various agencies were able to procure adequate supplies of roller powder from voluntary offers.

During the fiscal year about 90 firms, operating 120 plants, were affected by the order, and 291 million pounds of spray powder was produced. Approximately 176 million pounds, or 60 percent of total production, was set aside for war purposes. Designated agencies purchased 171 million pounds of spray powder, and 6 million pounds were released for civilian use. Total deliveries and releases thus exceeded set-aside requirements by 1 million pounds.

Exemptions numbering 306 were issued subject to the order authorizing the sale of set-aside powder to manufacturers for use in military contracts. Petitions for relief under the hardship clause declined substantially.

CONSERVATION AND DISPOSITION OF FLUID MILK AND CREAM

WFO 79, in effect since September 1943, is an allocation order for fluid milk and cream. Supplementary orders for 138 major population centers throughout the country establish upper limits (based on deliveries in June 1943) on the deliveries of fluid milk, cream, and milk byproducts which handlers may make to civilian consumers. Monthly sales quotas are established, and an attempt is made to keep these quotas related to changes in production and marketing conditions.

Thirty-four market agents administer the supplementary orders locally. Agents have from time to time been delegated the power to make limited local quota adjustments, to grant or deny preliminary relief on hardship petitions, and to authorize certain transfers of quota between handlers from one quota product to another. Moreover, they clear information on local conditions of supply and demand and thus assist in the fullest possible utilization of milk supplies in the flush season.

An expansion in quotas was required to coordinate the program with local supply and demand conditions, particularly the quotas limiting the products weighted most heavily with milk solids-not-fat, since the need for conserving milk solids-not-fat had been relieved. Cottage cheese was removed from quota control on October 1. Later, quotas on milk byproducts (skim milk and skim-milk drinks) and on cream volume (but not butterfat in cream) were established generally without upper limits.

Only a limited relaxation was given to milk quotas and quotas of butterfat in cream. An unusually advanced spring and a good rainfall, in addition to the withdrawal of the transfer privileges, brought about authorizations of milk-quota increases up to 10 percent and of cream-butterfat increases up to 15 percent on March 1. However, these authorizations represented no change in actual quota levels as compared with quotas resulting from transfer. Larger increases in milk quotas were made in April in order to permit full utilization of milk for which manufacturing facilities were not reasonably available. As the year ended, milk-quota levels were somewhat lower than in 1944. In May and June, butterfat-in-cream quotas were permitted to be advanced by 25 percent of base deliveries, the same levels that had prevailed in May and June of 1944.

In May, after quota restrictions on cream had proved to be an in-

centive for the promotion of cream substitutes not technically within the definition provided in the order, it became necessary to extend restrictions to include these products.

CHEESE AND CHEESE FOODS

WFO 92, in effect since February 1, 1944, limits the production of all varieties of cheese other than Cheddar, cottage, pot, and baker's, to the amounts produced in the corresponding calendar quarter of 1942. On April 1, 1945, the order was amended to permit a 10-percent increase in quotas for the April-through-June quarter. The order was suspended for the period June 8 to July 15.

Administration has involved the placing of restrictions on some factories which were unable or unwilling to divert increased milk receipts to other dairy products. During the winter and spring of 1945, field representatives visited some 75 factories to assist in working out satisfactory compliance arrangements.

Reports from processors indicate a total production of more than 258 million pounds of the restricted cheeses in 1942 and slightly more than 227 million pounds in 1944, or a net production decline of some 31 million pounds.

DRIED MILK

WFO 93 was put into effect on March 1, 1944, to check the diversion of milk into "nonstandard" dried-milk products that were not being purchased for war use and to assure the fulfillment of procurement schedules for dried whole milk and dried ice-cream mix.

All sales of dried milk to the armed forces and other war agencies were left unrestricted under the order. This was true also of commercial exports under licenses. Civilian sales of dried-milk products (35 percent or more milk solids) were limited to (1) 75 percent of the quantity sold to civilians during corresponding quarters in 1942, or (2) 10 percent of current sales to Government agencies and commercial exports, whichever was higher. In the case of compounds (less than 35 percent milk solids), 100 percent of 1942 sales applied to the first option.

MILK SUGAR

WFO 95, the milk-sugar order, was in full force during the first 2 months of the fiscal year. During that period complete allocation of the milk-sugar supply was made each month. Sales to hospitals, or institutions that used refined milk sugar under doctors' orders or prescriptions, and sales of refined milk sugar in retail factories for household or pharmaceutical use, were not subject to allocation. All requests for milk sugar for the production of penicillin, essential pharmaceuticals, sweetened condensed milk, and for Government contracts were granted in full. The allocation provision order was suspended September 1 because supply and requirements appeared to be in balance.

TURKEYS

WFO 106, effective July 17, 1944, was issued to help assure adequate supplies of turkeys for overseas shipments and holiday dinners for the armed services. In the fall of 1944 the order covered Wisconsin; Illinois, the "Del-Mar-Va Peninsula," certain counties in the Shenan-

doah Valley and in West Virginia, and all States west of the Mississippi River, except Louisiana. An amendment on April 8, 1945, removed Arizona, New Mexico, and the Del-Mar-Va Peninsula from its operation.

Only approved processors were permitted under the order to slaughter and pack turkeys. These processors were required to set aside and hold all turkeys processed for sale to the U. S. Army. During the fiscal year approximately 20 million pounds of hen turkeys had been procured for use by the Army in 1945. The order yielded about 50 million pounds of turkey, and approximately 22 million pounds of turkey were under contract to be delivered to the Army by early November 1944. Suspension of the order on November 4, 1944, allowed time for delivery of large quantities of turkey for the eastern markets as holiday food for civilians. (See also Turkeys on p. 32.)

POULTRY AND PROCESSED POULTRY

WFO 119, which went into force December 11, 1944, in effect provided for a set-aside of 100 percent of poultry in specific areas. Poultry procurement for the armed forces became necessary after voluntary methods had failed to yield adequate supplies. By January 1, 1945, the deficit exceeded 100 million pounds. Requirements called mainly for young chickens for broiling and frying, obtainable in quantity only from commercial broiler-producing areas with adequate processing facilities. Covering at first the Del-Mar-Va Peninsula and the Shenandoah Valley of Virginia and West Virginia, the order was extended to include counties in northern Georgia, Arkansas, Missouri, Oklahoma, and North Carolina.

Producers were permitted to transport poultry to local buyers or direct to authorized processing plants within a poultry area. Each local buyer was required to offer poultry received by him from farmers to an authorized poultry buyer or an authorized processor. Authorizations were issued to local buyers and to processors and receivers. The order did not apply to poultry used for home consumption by the grower. Retailers within a poultry area might be authorized to slaughter up to 50 chickens each week for sale and consumption within the area.

In March, a goals program was begun as an incentive to fuller utilization of processing capacity. Each processor received a goal and was permitted to retain for his own disposition half of the poultry processed over and above his goal, his half including rejected poultry. In May, the program was liberalized and the quantity of poultry to be delivered to the Army before any division of surplus was set at 80 percent of the goal.

Procurement was very satisfactory in areas where road blocks were used. Where they were not used, a large part of the poultry was moved out of the area in violation of the order.

DRESSED POULTRY

WFO 125, effective February 14, 1945, was issued to facilitate the procurement of canned poultry for war agencies. It regulated producers of canned poultry and eviscerators of poultry throughout the United States. Poultry canners were required to process all poultry according to the specifications of the Army and to set aside and hold

all poultry canned for sale to the Army. Poultry eviscerators were required to eviscerate poultry according to Army specifications under Department of Agriculture supervision. All poultry eviscerated was to be set aside and held for sale to the Army. At the time the order became effective, the supply of poultry for canning was so small that all stocks of eviscerated poultry in cold storage were set aside for sale to the Army.

A serious difficulty was the order requirement that total production of eviscerated poultry be set aside. Many large and small operators produced eviscerated poultry in plants not acceptable to the Army. The order was amended in March to relax restrictions on eviscerators. This created a new group of "limited poultry eviscerators" who were permitted to draw and sell for domestic account a quantity of poultry equal to their average weekly production for this purpose in 1944, but were not to exceed 10,000 pounds each week. A quantity not to exceed 3,000 pounds each week for domestic account was permitted without reference to production in an earlier year. This relaxation made it necessary also to permit "authorized poultry eviscerators" to sell up to 10,000 pounds of eviscerated poultry each week for domestic account.

By the end of the year, 62 poultry canners were authorized, although a few had not canned any chicken or turkey during the period of the authorization. Sixty plants were authorized to eviscerate poultry under WFA supervision.

STANDARDS, RESEARCH, AND MARKETING STUDIES

MARKET STANDARDS AND FACILITIES

Two new sets of tentative standards and grade specifications were issued and two sets of standards and grades were revised during the year. The new specifications were (1) Tentative U. S. Standards for Classes and Grades for Eviscerated Federally Inspected Chickens, and (2) Tentative U. S. Standards for Classes and Grades for Eviscerated Federally Inspected Turkeys. The Tentative U. S. Standards and Weights for Wholesale Grades for Shell Eggs were modified for simplicity and more complete agreement with consumer grades, and the Tentative U. S. Standards for Classes and Grades for Live Poultry were revised. Work was begun on standards and grades for frozen- and dried-egg products and for canned boned poultry.

Publications included Uniform Labels for Consumer Grades of Eggs, Miscellaneous Publication No. 560, a revision of Grading Dressed Turkeys, Farmers' Bulletin No. 1815, and reports on poultry- and egg-marketing developments.

Preliminary suggestions for organization and operation of a Nation-wide egg- and poultry-quality conservation program, based on uniform standards and grades, were prepared and submitted to leading industry members and officials in charge of this work in the States.

A program for holding egg-grading and training schools for 4-H Club members, Future Farmers, and adults was outlined and distributed.

MARKET AND MARKET-RESEARCH STUDIES

Detailed analyses of developments in the production, utilization, prices, civilian demands, military requirements, and other needs of milk and dairy products were continued during the year. These in-

cluded special studies of price and supply relations needed in developing wartime and possible postwar readjustments. Periodic estimates of prospective supplies for use in developing allocations were made in cooperation with other agencies.

To provide technical assistance to newcomers in dried-egg production, the Office of Marketing Services developed a mobile laboratory unit which was put into service in various plants located in the Central West. Laboratory analyses were made to assist in finding points of contamination and gathering other information useful to plant managers faced with operating problems.

In cooperation with the Agricultural Research Administration, OMS studied in detail the source of distribution of *Salmonella* bacteria in liquid and dried eggs. Other research subjects included the germicidal efficiency of sterilizing solutions used in egg-breaking rooms and the bacteriology of the termination method of producing dried-egg albumen.

Reports were made of the studies of State laws relating to market standards and grades, enforcement, and educational programs begun during the preceding year. The reports showed that the marketing of poultry products is handicapped by the use of numerous confusing and conflicting specifications, grade terms, and requirements that vary widely among the 48 States and by the lack of trained personnel to enforce compliance adequately.

The wartime shortage of wooden egg cases led WFA to cooperate with the Forest Products Laboratory at Madison, Wis., in conducting tests of materials, construction, and utilities of fiber and wooden egg cases, flats, and fillers in current use. Arrangements were completed for making tests to determine the egg losses and damage to egg cases in transit, and to compare results obtained in tests made at the laboratory with results of actual transportation in the field. Another series of tests of fiber egg cases, financed by the industry and conducted by a commercial laboratory in cooperation with WFA, resulted in the development of specifications for an economical and better-than-average fiber egg case.

In cooperation with egg-case manufacturers and the Association of American Railroads, tests were conducted to determine how great a speed and impact in switching operations will cause a 10-percent damage to eggs and cases. Transportation tests were made for manufacturers of egg cases, comparing fiber and wooden egg cases and the different makes of fiber egg cases.

Other marketing studies included surveys of the use of dehydrated foods (including dried eggs), ways of promoting the use of the new dehydrated foods, the possibilities of utilizing more dried-egg products in prepared flour mixes, and the type of package material with the greatest resistance to moisture.

INSPECTION AND GRADING

All inspection and grading of dairy and poultry products continued on a self-supporting basis. Services of the various State departments of agriculture have been available under Federal-State cooperative agreements, which were in force in all States except Wisconsin and Nevada.

Work started during the preceding year with the War Shipping Administration was extended to include Boston, Mass.; Jacksonville,

Miami, and Tampa, Fla.; Mobile, Ala.; Beaumont and Port Arthur, Tex.; and San Diego, Calif. In addition, arrangements were completed whereby grading service was rendered to the War Shipping Administration at country shipping points, thereby enabling the purchase of both dairy and poultry products on a graded basis f. o. b. shipping point.

Inspection for condition of damaged and over-age dairy products was expanded.

Heavy Government purchase programs of dry milk caused continued increases in samplings and gradings, and necessitated a number of sanitary inspections at plants producing the milk offered to the Government. Grading of dairy products for OPA continued heavy during the first half of the year.

Heavy Government purchase programs in processed cheese resulted in increased checking of such operations under Government supervision. Studies of rejections were conducted to determine the relation between processed cheese quality and operating methods.

Minimum requirements were being developed for facilities, sanitation, and operating methods in creameries that manufacture butter intended for merchandising with certificates of quality carrying U. S. grade identification.

Condition inspections were made of the majority of eggs purchased under the price-support program, and the information was used by CCC to determine the best possible disposition of the product.

Regradings were made of all storage shell eggs that previously had been purchased on a graded basis, and when these eggs were offered for sale the regrading was used as a basis for establishing the sale price. Large quantities of CCC-owned shell eggs were processed into frozen eggs to be used subsequently for drying purposes. All breaking operations were continued under OMS supervision.

All CCC-owned frozen eggs were examined for condition at the warehouses before they were shipped to drying plants.

The laboratory at Chicago began the bacteriological examination of dried and frozen eggs, including microbiological plating, direct count, and tests for the presence of *Escherichia coli*.

The inspection of poultry and poultry products was expanded considerably as a result of the issuance of WFO 125, which covered canned poultry for military uses.

MARKET NEWS

Dairy and poultry market news information covered supply, demand, movements, prices, price-quality relations, and other market developments for use in planning and conducting marketing operations. The dairy and poultry market news service at New Orleans was reestablished on July 1, 1944, in response to local industry requests, and leased-wire service between Portland and Seattle also was restored to provide a more effective exchange of information.

Price-reporting service on eggs and live poultry began at Fort Worth, Tex., in December.

The first step in reporting f. o. b. prices at shipping points was taken during the year when f. o. b. egg prices for Petaluma, Calif., were reported through the San Francisco office.

Market reports began to include weekly information on local wholesale and retail selling prices of milk and cream.

Weekly reports of receipts of eggs and live poultry at primary market receiving stations and packing plants in the Central Western States were expanded to show a break-down by States rather than for the area as a whole.

Reporting of the dressed poultry market was begun at Philadelphia, New York, and Boston.

Information on weekly retail movements of eggs was developed by the Los Angeles office.

Weekly reviews of egg and poultry markets were continued.

The Weekly and Monthly Dairy Market Reviews were extended in coverage to include all major dairy products.

A brief monthly review for the local market only was started in one market, with the expectation of extending it to all markets as soon as possible.

Market reports were used increasingly to spread information about food orders and other wartime dairy and poultry regulations.

A daily report showing Army purchases of eggs was released at Chicago early in the year to inform producers and dealers of the prices paid at different shipping or delivery points over the country. The report was discontinued after the egg supply situation reached the point where all purchases were being made at ceiling levels.

Limited market news on poultry and eggs was continued at Baltimore, Pittsburgh, Denver, New Orleans, and Fort Worth in cooperation with other commodity news services.

Cooperative agreements with California, Michigan, New York, and Virginia covering market news were continued. A new agreement with the Alabama State Department of Agriculture covered a special egg and poultry price-reporting service.

New projects under consideration included full-scale reporting services at Detroit, St. Louis, Kansas City, Fort Worth, Atlanta, and Cincinnati.

FATS AND OILS

Total supplies of fats and oils available during the fiscal year were smaller than during the previous year as a result primarily of the decrease in the production of lard and flaxseed. Total estimated supplies amounted to 14 billion pounds, some 300 million pounds less than anticipated at the beginning of the year. Total disappearance (domestic use and exports) was approximately 12.4 billion pounds. Stocks at the end of the fiscal year were 1.7 billion pounds, the lowest in several years.

MANAGEMENT

Lard continued as a major problem. During the year production declined from 3,500 to around 2,438 million pounds. Almost as great was the decline in ending stocks—from 778.4 to 120 million pounds.

As the year opened, the lard outlook was not good on account of the high stocks on hand, the large production anticipated, and the tight shipping and storage situation then existing. On July 15, 1944, amendment 9 to WFO 42 was issued. It permitted soap manufacturers to purchase and accept delivery of lard and rendered pork fat from July 17 to July 31, 1944, for manufacturing soap at any time without charging the lard and rendered pork fat against their quotas. Soap manufacturers bought about 15 million pounds of lard during this period.

Moreover, on lard chargeable against quotas under WFO 42 and for use as soap, they were not limited in the size of their purchases.

During the October-December quarter of 1944 the lard situation changed rapidly. Early estimates of lard production showed signs of being too high. Disappearance into civilian channels is estimated to have equaled the peak use of October-December 1943. Purchases for WFA's Office of Supply did not come up to the allocation, and deliveries against WFA commitments were made in part from stock. By January 1, 1945, WFA stocks had declined from the 334.4 million pounds of October 4, 1944, to 194.6 million pounds.

Effective January 19, 1945, lard, shortening, and cooking and salad oils were given point values of 2 per pound. After having used priorities to meet purchase requirements of lard from December 25, 1944, to January 20, 1945, WFA issued amendment 6 to WFO 75.3 (effective January 21), which required packers operating under Federal inspection to set aside lard at the rate of 7.5 pounds for each 100 pounds of the live weight of hogs slaughtered each week. In view of the tight lard-supply situation for civilians in the North Atlantic and Pacific States, lard from federally inspected slaughtering establishments in these States was exempted, under amendment 9 to WFO 75.3 (effective March 4), from the lard set-aside order. On March 26, the set-aside was amended to require only 5.5 pounds of lard per 100 pounds of live weight of hogs slaughtered, and lard in additional States was exempted. Under the amendment only about 40 percent of the federally inspected lard and rendered pork fat was subject to the set-aside, as compared with 69 percent under the original order.

At the end of the fiscal year, stocks of lard in all positions amounted to about 200 million pounds—60 million in farm stocks, 80 million pounds in stocks of the Office of Supply, and the remaining 60 million divided between soapers' and other commercial stocks.

EDIBLE FATS AND OILS

EDIBLE VEGETABLE OILS

Production of the four principal edible vegetable oils during the fiscal year was slightly more than 2.9 billion pounds—up about a tenth of a billion pounds from the previous year. Production of peanut oil decreased and production of cottonseed, soybean, and corn oil increased.

The chief problems continued to be the conservation of edible vegetable oils, proration of their consumption over the year, and the allocation of oils among various end uses and processors. It was necessary to keep in effect WFO 42 and WFO 29. WFO 42 limits the consumption of total fats and oils used in the manufacture of margarine, shortening, and salad and cooking oils. WFO 29 apportions the use of the four principal oils—cottonseed, soybean, corn, and peanut—so as (1) to assure the availability of the proper kinds and quantities of oils required for military, lend-lease, commercial-export, and civilian needs, and (2) to supply the more desirable oils on a basis equitable in relation to manufacturers' requests and to the supplies available.

Amendments made during the year in WFO 42 divided it into three separate orders, of which WFO 42 controls edible fat or oil products such as margarine, shortening, and oils; WFO 42a controls fats and oils used in protective coatings and the like; and WFO 42b controls

fats and oils used in soap. These amendments also increased the quantity exempt from quota restrictions and which is used by any manufacturer who used fats and oils in edible fat or oil products before July 1, 1945, from 10,000 to 15,000 pounds per quarter; changed the base period as applied to the manufacture of margarine from the average use in 1940-41 to the use in the calendar year 1944; reduced the civilian quota for the margarine manufacturer from 167 percent of the base period (average 1940-41) in the first quarter of 1945 to 110 percent of the new base period (calendar year 1944) during the second quarter of 1945; reduced the civilian quota for the manufacture of edible fat or oil products other than margarine from 88 to 80 percent of the base period (average 1940-44) during the second quarter of the 1945 calendar year; and defined oil used to can tuna, bonita, yellow-tail, or sardines as not being a fat or oil within the provisions of WFO 42 and therefore made it ex-quota.

There were no essential changes in WFO 29. The partial suspension with respect to restrictions on delivery of crude cottonseed, peanut, soybean, and corn oils to refiners for refining purposes was extended.

RATIONING OF FOOD FATS AND OILS

Ration controls on food fats and oils were relaxed before the fiscal year began. The surplus of lard caused the removal of that product from ration control on May 24, 1944, and it was not brought under ration control again until supplies became relatively short. Effective January 19, lard was assigned a point value of 2 per pound.

Effective April 16, 1944, point values on shortening and oils had been reduced to zero, where they remained until January 19, 1945, when these products were assigned point values of 2 per pound.

Butter, owing to its continued scarcity, was retained under ration control and point values, which were at 12 per pound for creamery butter, were raised successively until they reached 24.

Margarine also was neither removed from rationing nor reduced in point value to zero. The point value was reduced to two per pound effective April 30, 1944, and on January 28, 1945, was raised to three.

Point values were increased as the food-fat situation tightened. As the year ended they stood: Creamery butter, 24; processed and farm butter, 12; margarine, 14; lard, 12; and shortening and oils, 12.

INEDIBLE FATS AND OILS

GLYCERINE

The supply of glycerine changed from relative abundance to relative tightness. Glycerine exports rose from an average of 250 thousand pounds monthly during the first 6 months of 1944 to 21½ million pounds in May 1945 when the Foreign Economic Administration was restricting exports only very slightly. At about the same time during the spring, domestic disappearance began to exceed domestic production. As a result, stocks declined and became maldistributed. Effective June 21, 1945, WFO 134 was issued. It restricted inventories of users to a 30-day supply and of distributors to a 20-day supply. The order was expected to help producers and refiners rebuild their stocks so that they might readily meet emergency demands. As the year closed, total stocks were still above minimum levels.

SOAP

The supply of fats available for soap production decreased. Production of inedible tallow and grease declined more than 100 million pounds under production of the previous fiscal year. During the first part of the year, use of certain fats and oils was permitted in soap without charge to civilian quotas. Fish oil was permitted in soap on an ex-quota basis until March 31, 1945.

Purchases of lard and rendered pork fat for soap were permitted until November 13, 1944, subject to quota restrictions. Lard and rendered pork fat purchased prior to this date remained in soapers' stocks at the end of the year.

Requirements for soap for exempt agencies increased by about 50 percent, the increase being divided about equally between soap for military and other Government requirements and soap for the synthetic rubber program.

The decline in the soap-fat supply and the increase in military and industrial use resulted in a reduction of the quota for civilian consumption during the last half of the year. In the first half, the quota for package and bar soap was 90 percent, and for bulk soap, 110 percent. During the third quarter, quotas were reduced to 85 percent for package and bar soap and 90 percent for bulk, and in the last quarter they were further reduced—to 74 percent for package and bar soap and 84 percent for bulk.

Other soap-fat saving materials, such as rosin and the better grades of water softeners, also decreased in supply. Beginning in March 1945, the quantity of rosin permitted in soap was only 25 percent of that so used in 1944.

As the year ended, it was apparent that a maintenance of even the current inadequate rate of soap production for civilian use would be difficult unless ex-quota uses declined or imports of fats increased.

INEDIBLE TALLOW AND GREASE

On July 1, 1944, total stocks of inedible tallow and grease were at the relative easy figure of 355.5 million pounds. The provisions of WFO 67 that limited inventories of tallow and grease had been suspended.

The decline in hog slaughter from the previous high level reduced the production of grease. Cattle slaughter increased slightly, but the small increase in inedible tallow production did not offset the decline in grease production. By March 1, 1945, stocks had declined to 247.5 million pounds and monthly disappearance continued to exceed production. Stocks became maldistributed, and many essential users had difficulty in obtaining adequate supplies.

WFO 67 was reinstated, effective March 3, with provisions restricting individual manufacturer's inventories to a 2½ months' supply and producers' and dealers' inventories to half a month's supply. Effective May 1, the inventories of individual manufacturers were restricted to a 2 months' supply. On June 1, stocks of inedible tallow and grease were at 197.8 million pounds—approaching the 191 million pounds of July 1, 1943, the low of recent years.

DRYING OILS

The drying-oils situation deteriorated mainly because the production of linseed oil decreased. Although imports of oil and flaxseed did not come up to expectations, the main reduction resulted from a decline in the production of domestic flaxseed from 52 million bushels (fiscal year 1943) to 23.5 million.

The use of drying oils in protective coatings, coated fabrics, and floor covering was controlled under WFO 42a. During the first half of the fiscal year manufacturers of these materials were permitted to use only 70 percent of the quantity of fats and oils they used in the 1940-41 base period. Deterioration of the linseed-oil position necessitated a reduction of the quota on the materials to 50 percent during the third quarter and 40 percent during the fourth.

The extremely tight linseed-oil supply and the rather unequal distribution of inventories during the last half of the fiscal year necessitated the issuance of priorities for obtaining linseed oil for holders of military contracts. To assure equitable distribution in inventories, WFO 124 was issued. As amended (effective April 24, 1945) this order permits individual users to accept delivery of each type of oil (raw, boiled, blown, etc.) up to the equivalent of one-third of the quantity of that type used in the previous quarter.

WFO 137, effective July 1, 1945, was issued to place castor oil under complete allocation control. This order is similar to WFO 32, which had been effective during most of 1943 and a part of 1944.

FATTY ACIDS

The supply of fatty acids was relatively easy until early in January 1945. WFO 87, which restricted inventories, had been suspended and WFO 53, which restricted the use and distribution of animal oil, neat's-foot oil, and red oil, was partially suspended on August 22, 1944.

Early in January 1945, military requirements for various fatty acids—especially stearic acid—were stepped up considerably and it became necessary to issue Food Regulation 10 priorities to obtain deliveries of the required quantities of fatty acids for the essential military uses. To meet the tightening situation, several amendments and new orders were issued. WFO 87 was reissued, effective April 1, 1945, to restrict fatty-acid inventories. WFO 129 was issued, effective April 1, to regulate distribution and use of commercial stearic acid. It set up a group of essential uses for stearic acid and required suppliers to fill orders for these uses before handling orders for less essential uses. WFO 53, partially suspended August 21, 1944, was reinstated and amended so as to regulate distribution and use of distilled red oil. As a result of these actions, fatty-acid stocks and supplies improved.

WOOL GREASE

The unrestricted demand for wool grease remained substantially greater than production. WFO 76 (as amended and issued effective October 1, 1944) made sufficient supplies available for essential war uses under a certification plan.

MISCELLANEOUS INDUSTRIAL OILS

Shortages in fats and oils, rosin, and naphthenic acid caused a sharply increased demand for tall oil, which is essential in drier manufacture, metal-working oils and compounds, mineral flotation, and asphalt emulsions.

To provide for these uses WFO 136, regulating the distribution and use of tall oil and limiting the inventories of users, was issued effective June 28, 1945.

WFO 60, which regulated use and distribution of fish oil, was terminated on July 3, 1944, as a result of the favorable supply of fats and oils. In the revision of WFO 42 that resulted in the issuance of three separate orders (WFO 42, WFO 42a, and WFO 42b) covering edible products, protective coatings, and soap respectively, the use of fish oil was permitted on an ex-quota basis until March 31, 1945. These provisions caused larger uses of fish oil in protective coatings and soap.

IMPORT ACTIVITIES

An important OMS function has been to estimate requirements of the imported oils and oil-bearing materials needed to meet essential demands of the armed services, lend-lease, and civilians. After these requirements for imported oils and oil-bearing materials are presented to the Combined Food Board and granted, WFA directs the Foreign Economic Administration to make the purchases. Acting with the Office of Supply, OMS arranges for shipping space. In the case of some oils and oil-bearing materials, allocations are made to industrial users.

For some imported oils, such as palm, rapeseed, and high lauric-acid oils, there are no domestically produced replacements. OMS was able to obtain enough palm oil and rapeseed oil to keep the all-important steel and marine-lubricating oil industries fully supplied. Importations of copra and coconut oil, although not so large as desired, met sufficient essential needs.

During the year 1944-45, importation of castor beans and babassu oil and kernels was returned to private hands.

FRUITS AND VEGETABLES

SPECIAL PROGRAMS

MARKETING-AGREEMENT PROGRAMS

About 48,500 citrus growers in marketing-program areas of California, Arizona, and Florida received on-tree returns of about 246 million dollars. Throughout the year (except October 15 to December 10, when the supply was so limited as to prevent proper utilization of prorated allotments by handlers), regulations under order 66 covering the handling of oranges grown in California or Arizona and providing for weekly volume regulation of shipments in interstate commerce and to Canada and Alaska, were recommended weekly.

Shipments of California and Arizona lemons, regulated by agreement 94 and order 53, were unlimited from June 11 to October 31, 1944. The first recommendation for weekly volume regulations during the 1944-45 marketing season was not made until January 21, 1945, because terminal markets had been undersupplied. Shipments

were limited weekly thereafter. Amendments to two weekly regulations were recommended and approved.

Eight regulations and 1 amendment were recommended and approved during the 1944-45 marketing season in connection with agreement 96 and order 55, regulating the handling of grapefruit grown in Arizona and in certain sections of California.

Thirteen regulations, limiting grades and classes of oranges to be shipped, were recommended and approved under agreement 84 and order 33, which regulated the handling of oranges, grapefruit, and tangerines grown and shipped from Florida. Two orange and two tangerine regulations were amended.

Five grapefruit regulations were recommended and approved; a sixth was disapproved.

Violations of regulations in citrus-marketing programs were comparatively few.

Marketing agreement 100 and order 63, regulating the marketing of hops, were not in operation because production was inadequate to meet all requirements.

The suspensions of marketing agreement 99 and order 62, which regulated the handling of fresh peaches grown in Georgia, were revoked on December 26, 1944, and a referendum was directed. Analysis of the votes showed that 93.4 percent of the 241 producers that voted in the January 22 to February 1 referendum favored continuation of the marketing-agreement program.

No regulations were effective during the 1944 season under marketing agreement 85 and order 36, which regulated the handling of fresh Bartlett pears, plums, and Elberta peaches grown in California. An analysis of the voting in a referendum conducted during January 1945 indicated that a continuation of the program was favored by 93 percent of the 646 producers voting on Bartlett pears, 91 percent of 606 voting on plums, and 92 percent of 277 voting on Elberta peaches. Separate regulations by grade and size were instituted for 3 varieties of California plums on May 31, 1945; for 4 varieties on June 24; and for 6 varieties on June 30. Similar regulations for about 12 additional varieties of California plums during the summer of 1945 were expected to be instituted; however, before this could be done, it became apparent that season prices for plums would average above parity, so regulation was suspended.

Committees were selected and offices for compiling statistical data were maintained by the marketing-agreement organizations for Washington and California winter pears and California Tokay grapes. Organizations for Oregon-Washington fresh prunes, California Hardy pears, Colorado peaches, and Utah peaches were inoperative because prices did not fall below parity.

For the same reason, marketing agreements affecting nuts and vegetables, including Utah onions, Mississippi tomatoes, and potatoes in eight States, remained inoperative. A few vegetable marketing agreements were terminated after a study to determine the practicability of resuming operations under them. Also studied was the possibility of developing marketing agreements for crops in areas where such agreements had not recently been used.

On November 8, 1944, the Director of Economic Stabilization stated that the subsidy program for canned grapefruit juice would be continued during the 1944-45 season instead of making equivalent in-

creases in the applicable civilian ceiling prices. The program was announced 2 days later. After considerable negotiation about maximum fruit costs that would be covered by subsidy payments, the formal directive authorizing the program was issued May 25, 1945, and the subsidy offer was issued June 20, 1945. OMS administered the program throughout the fiscal year.

Prices to growers for 1944-crop natural-condition raisins were supported at \$180 a ton for sun-dried Thompson Seedless and Sultanas, \$195 for Muscats, and \$240 for Zante currants. These prices were \$25 to \$30 a ton higher than the support prices for 1943-crop raisins. Dehydrated raisins were supported at prices ranging from \$200 a ton for Soda Bleached Thompsons to \$252 for Valencia-type Muscats. Packers purchased the entire 1944 production of standard-quality raisins at prices equaling WFA support prices.

Also administered by OMS was the support-price program for 1944-crop dried prunes. WFA support prices were as follows: California Three District, 10 cents per pound (basis); California Outside District, 9 $\frac{3}{4}$ cents; and Northwest, 9 $\frac{3}{4}$ cents (for fruit of size comparable with California Outside District). These prices were 1 $\frac{1}{2}$ cents higher than support prices for 1943-crop prunes. Packers purchased the entire United States production of 1944-crop dried prunes at prices about equal to WFA support prices.

PECTIN PROGRAM

Owing to the shortage of dairy butter, the demand for fruit spreads increased tremendously. To make spreads available, it was necessary to supply preservers with pectin. A program of distribution of this product was worked out with the industry whereby orders for lend-lease, military, and civilian supplies were filled equitably. In many cases preservers when supplied with pectin were ready to close their plants. The industry manufactured the largest volume of fruit spreads ever produced in a single year.

FOOD-ORDER ADMINISTRATION

FRUITS

WFO 3, effective January 6, 1943, relative to production and sale of citrus juices, was inoperative throughout the year except for reporting requirements.

WFO 6, effective January 13, 1943, requiring handlers of fresh citrus fruit to set aside during each week specified quantities of fresh fruit to assure adequate supplies to processors, was operative only with respect to California-Arizona oranges between July 16 and September 3, 1944.

WFO 17, effective January 30, 1943, as amended, provided that raisin-variety and Zante currant grapes produced in 8 designated counties in California be converted into raisins or Zante currants or sold to: (1) The Office of Marketing Services, (2) any person designated by the Director of OMS, or (3) any dehydrator for conversion into raisins or Zante currants. It also prohibited the use without authorization of raisins or Zante currants for conversion into alcohol, brandy, wine, or any other beverage, any concentrate, sirup, or nonfood product or byproduct. From the profits realized from the handling by

CCC of grapes and raisins purchased from growers, an incentive payment of \$10 a dried ton was paid to all producers affected by WFO 17 who sun-dried their grapes. About 6 million dollars remained in the funds at the end of the year to be distributed to producers. Between April 3 and the end of the year the Raisin Producers Association, acting for CCC, purchased about 1,200 tons of out-of-condition raisins from packers or the trade and resold them to distilleries and wineries under a temporary program that permitted this practice.

WFO 22.6, effective February 11, 1944, designated the percentages of the processor's packs of canned fruit and fruit juices to be set aside for Government agencies. Under the order, 33,200,000 cases (basis 24, 21½'s) were obtained.

WFO 22.8, effective January 27, 1945, controlled the distribution of canned fruits and fruit juices to be produced during 1945. Amended 3 times, the order resulted in the setting aside of an estimated 32,870,000 cases (basis 24, 21½'s) for Government purchase.

WFO 22.7, issued October 7, 1944, to succeed WFO 22.5, provided for the setting aside by processors of certain quantities of their 1944-45 pack of canned citrus fruit and juices for delivery to Government agencies.

WFO 118, effective November 28, 1944, prohibited any processor from using, selling, delivering, or accepting delivery of grapefruit segments for any purpose other than the packing of canned grapefruit.

WFO 122, issued January 17, 1945, restricted processors' sales, deliveries, and shipments of canned grapefruit juice and canned blended orange and grapefruit juice to the armed forces. It was amended on January 27 to include canned orange juice.

WFO 16, effective January 30, 1943, required dried-fruit packers to set aside for Government agencies 100 percent of their acquisitions of dried fruits. Between September 1, 1944, and May 15, 1945, approximately 307,000 tons of dried fruits were released for delivery into normal civilian trade channels.

WFO 62, effective July 6, 1943, prohibited the use of figs in the manufacture of alcoholic beverages and nonfood products or by-products. Specific lots of substandard figs were released from its provisions.

WFO 107, effective July 12, 1944, limited the quantity of red sour cherries that could be frozen in New York State. The aim was to make more red sour cherries available for hot-packing.

WFO 108, effective July 19, 1944, limited the shipment of Bartlett pears from certain California producing areas during the 1944 season to 100 percent of the quantity shipped during the 1942 season. Purpose was to assure California canners enough Bartlett pears to enable them to meet Government requirements. The order was terminated December 27, 1944.

WFO 133, effective June 20, 1945, restricted the processing of red sour cherries to hot-packing and freezing. The order limited the freezing of cherries to 25 percent of the net weight frozen by the processor in 1944 (except in New York State, where it was 50 percent). Also set aside were all hot-packed and frozen cherries from the 1945 pack.

WFO 55, effective June 9, 1943, was amended as of July 1, 1944, to allow shipment from California of only those fresh plums meeting the

requirements of U. S. No. 2 grade, with a tolerance for limited hail damage. The order was terminated December 27, 1944.

WFO 69, effective July 28, 1943, during the 1945 fiscal year restricted the use in the manufacture for sale of alcoholic products of 19 of the 25 kinds of fruits and berries listed in the order as originally written. The order provided for the release of restricted fruit for use in the production of an alcoholic product if no other outlet was available.

WFO 102, effective June 9, 1944, limited the shipment of fresh peaches from Georgia to peaches meeting (except for certain permitted tolerances) the requirements of U. S. No. 2 grade with respect to decay, maturity, worms, and worm holes. It prevented the shipment of wormy and immature peaches during the season and was terminated December 27, 1944.

WFO 121, effective January 16, 1945, was issued to assure to Government agencies, particularly the armed forces, an adequate supply of northwestern apples. It provided that no person might ship, sell, or deliver (except to Government agencies) any apples of the Wine-sap, Newtown, or Delicious varieties grown and located in Washington and Oregon. Apples not desired by the armed forces were released into civilian trade channels. The order was terminated May 2, 1945.

VEGETABLES AND NUTS

WFO 22.6, effective February 11, 1944, and WFO 22.9, effective January 30, 1945, provided for the setting aside for procurement by the armed services of certain quantities of canned vegetables of the packs of 1944 (under WFO 22.6) and 1945 (under WFO 22.9).

WFO 30, effective March 21, 1943, and issued to make dehydrated vegetables available to the Government in maximum quantities, was terminated for onions July 17, 1944, except for reporting provisions. It had been terminated for products other than onions on June 1, 1944, except the reporting provisions.

WFO 82, effective October 2, 1943, required the setting aside of a specified percentage of merchantable or graded walnuts for shelling, and prohibited the shipment of low-grade or cull walnuts in shell. During the 1945 fiscal year, approximately 86,214,000 pounds of merchantable in-shell walnuts were inspected and certified for shipment, and approximately 8,700,000 pounds were inspected and certified for shelling.

WFO 101, effective June 5, 1944, was designed to assist the Army Quartermaster Corps in the procurement of pickles and pickle products from the 1943 and 1944 crops of cucumbers for pickles.

WFO 120, effective December 11, 1944, was issued to assure adequate supplies of good-quality Irish potatoes for the armed forces. It required shippers of potatoes grown in designated areas to offer them to Government procurement agencies before making deliveries elsewhere. Offices were established at 14 stations to issue shipping permits for civilian and military deliveries. Each lot of potatoes offered was required to meet the order specifications as to quality and size, and as to container type and size.

STANDARDIZATION

New standards were developed for fall and winter-type squash and summer squash. Standards were revised for green corn, sweet corn

for canning, garlic, northern-grown onions, plums and prunes, sweet-potatoes, and watermelons. Investigational work for the revision of standards was completed on bunched carrots, topped carrots, carrots with short-trimmed tops, and cabbage.

Minimum shipping requirements for citrus fruits in Florida, peaches in Georgia, and plums in California were developed in order to protect the growers' market, conserve containers, and prevent shippers from shipping low-quality products.

Six new U. S. standards for grades for processed fruits and vegetables were developed, many special specifications were developed or revised for special-purchase programs, 16 U. S. standards were revised or amended, and 8 Federal specifications were developed, amended, or revised. Nine Federal specifications were in the process of development or revision as the year ended.

New issues covered grape juice, tomato paste, dried figs, frozen apricots, frozen brussels sprouts, and frozen peaches.

Revisions or amendments covered canned asparagus, canned apricots, canned beans (green or wax), canned peas, grapefruit juice, grapefruit and orange juice, concentrated orange juice, tomato pulp (puree), dried apricots, dried peaches, dried pears, dried prunes, frozen lima beans, frozen peas, and frozen strawberries.

New or revised War Food Administration specifications issued during the year covered dehydrated beets, dehydrated cabbage, dehydrated carrots, dehydrated onions, dehydrated rutabagas, and dehydrated white potatoes.

New or amended Federal specifications which were issued covered canned asparagus, canned snapbeans, dried currants, orange juice, peanut butter, shrimp (raw, boiled, or frozen), tomato paste, and tomato puree.

Federal specifications in process of development or revision as the year ended covered canned apricots, dried apricots, dried figs, canned peaches, dried peaches, dried pears, dried prunes, chili sauce, and canned tuna fish.

Sixty demonstrations of United States standards for grades of processed fruits and vegetables were made to approximately 2,500 people.

Container-research activities were continued. Ways of packing more dehydrated products per unit of volume in containers resulted in the conservation of container material and shipping space. For example, it was discovered that if dehydrated cabbage is treated with heat just before packing, 13 pounds of it can be packed in the space ordinarily filled by 7 pounds. Continued also were studies of drained weights, the "fill" of containers, and the suitability of types of containers for canned fruits and vegetables.

INSPECTION

The volume of inspections made for the Navy, especially at Atlantic and Pacific ports, increased greatly over the preceding year. Inspection for the Quartermaster Market Center of the Army also increased greatly at certain ports and at cold-storage plants. Increased inspections, especially of potatoes, were made at shipping points for shippers who delivered to the Quartermaster Market Center. Also much increased was the volume of inspections made at 10 port cities of less-than-carlot quantities of fruits and vegetables delivered to steamship

lines operating under War Shipping Administration contracts or charters.

Inspections at shipping point were materially heavier. These covered large volumes of potatoes in Maine, Idaho, Colorado, California, North Carolina, and elsewhere in connection with WFA set-aside orders which were issued to assure adequate supplies for the armed forces. There were increased inspections of raw products, especially tomatoes and apples, at the time of delivery to cannery plants. Under the Commodity Credit Corporation's peanut-marketing program the inspection service inspected all shipments of U. S. No. 2 shelled peanuts. In the 8 States where this work was done it amounted to about 4,500 cars.

Destination-carlot and less-than-carlot inspections were made at 59 terminal markets, naval stations, and Quartermaster Market Centers. At these points inspection for commercial firms totaled 30,296 carloads and carload equivalents—about the same as during the previous year. Moreover, at these points 86,617 carload equivalents were inspected for various agencies, including the Navy, Army, Marine Corps, Coast Guard, Veterans' Administration, and city and county institutions. Most of this tonnage consisted of less-than-carlot quantities which were inspected at the time of offer for delivery to these agencies, and the inspections were made to determine whether the fruits and vegetables came up to specifications and were in a condition suitable for the intended purpose. The volume of this work almost doubled that of any previous year.

Shipping-point inspections were made at hundreds of loading points throughout the country under cooperative agreements with State departments of agriculture and other organizations. Approximately 2,000 licensed inspectors handled the work. They were trained and supervised by about 30 Federal supervising inspectors. The carlot inspections at shipping points numbered 606,713 carlot equivalents or 51,671 more than during the preceding year. In addition, about 114,109 carlot equivalents of raw products were inspected at the time of delivery to canning plants in 18 different States. This work was much heavier than during the previous season, when 82,050 carlot equivalents of raw products delivered at canning plants were inspected.

OMS continued to inspect for all Federal departments the purchases of canned, frozen, dehydrated, and dried fruits and vegetables; canned, dried, and brined fish; jams (preserves), jellies, peanut butter, citrus concentrates, fruit juices, sugar, salt, spices, coffee, soups, and large quantities of miscellaneous products such as fruit oils, extracts, pectin, citric acid, mincemeat, gelatin dessert powder, cocoa, fruit bars, and candies.

Although the amount of goods reported in pounds decreased by 3.8 percent, the amount of case goods inspected increased by 25.2 percent. This very large increase was the result of the large increase in the amount of goods necessary to meet growing military requirements.

As a result of a shortage of inspectors, no attempt was made to expand the continuous factory inspection service. Fifty-six companies with 74 plants received the service—about the same as during the preceding year. The volume of case goods inspected increased by 11.3 percent, and that of bulk goods or goods in large cartons increased from a negligible 102,334 pounds to 18,843,135 pounds.

A heavy volume of canned and frozen foods was inspected for

various commercial agencies. The entire packs of many packers were inspected and certified. Wholesale grocers, chain stores, and other retail utilities used the service extensively. The amount of goods inspected commercially (reported in pounds) increased by 36.3 percent, although the amount of case goods inspected decreased by 19.7 percent.

REGULATION

PERISHABLE AGRICULTURAL COMMODITIES ACT

Features of the year's work were considerable increases in the number of licenses in effect, in the amount of money received in payments of license fees and accrued arrearage, and in the payments made by dealers as a result of informal amicable settlements of disputes presented through complaints filed under act provisions. In the enforcement of the Perishable Agricultural Commodities Act, 5,627 new licenses were issued, an increase of 326 over the previous year, and 3,965 licenses, a decrease of 655, were terminated because of business discontinuance or change of name or organization. At the end of the fiscal year 20,967 licenses were in effect, an increase of 1,662. License fees received amounted to \$234,911.78, an increase for the year of \$22,645.58. Collected arrearage fees and penalties increased over the previous year from \$17,478.59 to \$28,448.83, or 63 percent. During the year, as in the other years since the act became effective, receipts from the sales of licenses under it exceeded by about \$40,000 the amount expended for administration of this act, the Produce Agency Act, the Standard Container Acts, and the Export Apple and Pear Act.

Complaints of alleged violations of the act numbered 2,020, a decrease of 38. Personal investigations of complaints numbered 612, an increase of 44. Informal amicable settlements of 888 complaints were reached, an increase of 12 from the preceding year, but payments made as the result of amicable settlements amounted to \$1,064,554.35, an increase of 13 percent. Eighty-six formal decisions were rendered, an increase of 3½ percent; this number represented reparation awards totaling \$69,082.85. No licenses were revoked, 3 were suspended from 30 to 90 days, and 8 were suspended automatically because of nonpayment of reparation awards.

PRODUCE AGENCY ACT

Only 7 complaints were recorded during the fiscal year, as compared with 10 during the preceding year. The number was small because all transactions involving apparent violations of both the Produce Agency Act and the Perishable Agricultural Commodities Act were handled under the latter. The two acts are enforced by the same personnel.

STANDARD CONTAINER ACTS

In the enforcement of the Standard Container Acts of 1916 and 1928, 255 different sizes and types of baskets (434 lots or 1,293 individual samples) were tested in the laboratory. Sixty-two, or 25 percent, required corrections; of these, 23 were corrected, as well as 10 received during other years. Specifications were approved for 10 new baskets and revised for 1.

Seventy-two were tested, of which 66 were found to be satisfactory after a test of 223 samples. In both laboratory and field work, 1,516 samples were tested—15 percent more than during the previous year. Tests were made of 1 or more baskets for 110 factories, or half of the factories listed as still in business, as compared with a 38-percent coverage in 1944.

Investigations looking to the standardization of the 24-quart American strawberry crate were continued.

Revised standard specifications for square-braid splint baskets, developed during the preceding year, were put into use tentatively.

MARKET NEWS

Twenty-one permanent fruit and vegetable market offices and 39 temporary shipping-point offices were maintained for a period of from 3 to 4 weeks to 9 months. The offices at Cleveland, Detroit, and Seattle, closed during the preceding year, were reopened; funds were restored directly by Congress. Marketing information was distributed to 20 permanent offices and 8 temporary offices over approximately 8,600 miles of leased wire. The Los Angeles office and 2 temporary offices in California were served by that State's short-wave radio. The other temporary offices and the permanent office at New Orleans were served by commercial telegraph from strategically located relay offices on the leased wire. A total of 9,313,396 mimeographed market reports were mailed to approximately 62,000 individuals and firms. About 41 large newspapers and the 3 major press associations carried the reports, thus greatly expanding the distribution of information. Seventeen permanent offices and several temporary offices supplied radio information for the benefit of producers, distributors, and consumers over approximately 498 stations. In 7 offices these programs were "voiced" by the market news representative.

Cooperative agreements, maintained with 20 States and the Territory of Hawaii, provided a coverage much greater than could have been handled by the Federal Department alone. New agreements, made during the year with Alabama and Washington, covered operations at Montgomery and Seattle. The Florida agreement was expanded to provide additional service at Lakeland.

In the permanent offices technical news representatives during the year interviewed the produce trade during active-trading hours to obtain complete, detailed, and up-to-the-minute knowledge of supply, demand, trading, quality and condition, market trends, and prices of all important fruits and vegetables. The office clerical forces obtained a complete record of carlot, boat, and express receipts by States of origin, diversions, and unloads during the previous 24 hours, plus a record of cars held on track during the current morning. In 10 cities a record of truck receipts was obtained and converted to carlot equivalents. In 4 of these cities truck receipts were collected under cooperative agreement with the State.

All the above information was consolidated into daily mimeographed reports. These reports also showed carlot shipments of the important fruits and vegetables, by States of origin for the previous day; f. o. b. reports from shipping areas where offices were being maintained; and in some cases limited information about conditions in other city markets. Information on local receipts and track holdings, market tone, and prices was sent in code over the leased wire for use in shipping

areas and at other market offices. A telegraphed report, prepared in Washington, showed the total arrivals and track holdings of important commodities in 16 important markets. Monthly and annual carlot unload reports, published at all permanent offices, showed carlot, express, and boat unloads, and, where obtainable, truck receipts.

The reports of the temporary field offices, although resembling those of the permanent offices, covered only those commodities marketed from the local shipping area. Generally they showed carlot shipments, original destinations or passings, diversions of cars shipped from the area, local f. o. b. information (especially competitive information) from other producing areas, and reports from the major terminal markets.

Weekly peanut and semi-monthly honey reports were issued from Washington. The peanut report covered prices and a résumé of crop conditions in important shipping areas as reported by cleaners, shellers, millers, warehousemen, and brokers. Terminal-market conditions and prices were reported by market news representatives in city markets. Also included was information on peanut meal and oil. The report was mailed to approximately 1,200 individuals and firms. The honey report covered the same type of information for the beekeeping and honey industry. The f. o. b. portion of the honey report was based on questionnaires sent to about 600 beekeepers, packers, and dealers located in major producing areas or markets. The honey report mailing list numbered about 2,500.

The Washington office made and maintained all arrangements with the railroads, boat lines, and the express company for obtaining information on shipments, diversions, passings, cars placed for loading and cars held in loading areas, primary destinations, arrivals, cars on track, and unloads by commodities in important terminal markets where offices are located. A report of shipments for the entire country, covering movement of 46 fruits and vegetables during the 24-hour period (midnight to midnight), was collected, compiled, and released early each morning by telegraph to all permanent offices and for relay to temporary field offices as well as to such commercial firms as requested the information at their expense. During the fiscal year, shipments of carloads of fresh fruits and vegetables by rail and boat were reported. Growers, shippers, and receivers found this shipment release, as well as the other collected and released data pertaining to current movement, helpful in the equitable distribution of fruits and vegetables. Also compiled were a weekly comparative summary of carlot shipments and an annual summary of shipments by commodities, States, and months. Additional statistical summaries were compiled and published in cooperation with the Bureau of Agricultural Economics to show these carlot shipments by States, counties, way-billing stations, and months.

Truck movement during the period of operations of the temporary field offices was reported for Georgia peaches, North Carolina strawberries, Del-Mar-Va strawberries, and fruits and certain vegetables from Michigan.

GRAIN

The total production and marketing of grain and grain products reached an all-time high. Demands for domestic use, requirements of the armed services, and exports to the allies of whole grains and their

products as well as beans, peas, rice, hops, hay, and seeds, caused a steady flow of these commodities through market places and a heavy demand for inspection throughout the entire year. This placed an unusual burden on the inspection system, which functions as an integral part of merchandising, and also on the distribution system, which aimed to get equitable distribution of those commodities in short supply.

In October and November 1944, under the Cuban flour export program, payments were authorized from Section 32 funds for 801,640 bags (100 pounds each) of flour sold for export to Cuba. The rate of payment was \$1.35 per hundredweight and the amount obligated was \$812,213.73. The program was developed to fulfill a commitment made by the United States in connection with the purchase of surplus sugar of the 1944 Cuban crop, under which flour was to be made available to Cuba at prices equal to the cost of flour imported from the United States during the previous year.

Because the Cuban Government permitted bakers to increase retail prices of bread and the State Department held this to be a violation of the Stabilization Agreement, no payments were authorized on exports to Cuba between April 28 and October 4, 1944. The result of this suspension was that full requirements of Cuban consumers were not met fully during the summer and fall of 1944. Payments were resumed on a limited quantity of flour after the Cuban Government had restored retail bread prices to approximately their former level.

FOOD-ORDER ADMINISTRATION

WFO 1, controlling the baking industry, was issued in December 1942 to conserve food, materials, and manpower, to provide for general and economic distribution of bread and vitamins, and to enable bakers to meet increased costs. The order restricted the amounts of shortening and sugar used in bread making. Before amendment 11 was issued on August 21, 1944, the amount of milk used in bread making also was restricted. The prohibition against consignment selling, returns, and credit has conserved tremendous quantities of food by preventing all except bona fide sales of bakery products. Also restricted were the number of varieties of bread and semi-bread-type rolls to be made, and the furnishing of equipment and the giving of samples of bakery products. On May 10, 1945, crackers, cookies, ice-cream cones, wafers, pretzels, matzoth, matzoth products, rusk, zwieback, toast, and bread crumbs were excluded from control of the order. These products are low in moisture content and suitable for human consumption for a considerable time after manufacture.

WFO 10, the rice order, was amended five times during the year. Amendment 5, effective August 1, 1944, postponed the setting aside of milled rice for sale to Government agencies until October 1. As of that date rice millers were required to set aside each calendar month and hold for sale to a Government agency 35 percent of the total brown and milled rice they had milled during the month. On October 15, another amendment required southern rice millers to set aside only 25 percent of brown and milled rice of certain classes commonly called short- and medium-grain rices. California millers were required to continue to set aside 35 percent of their total milled rice production.

Effective February 13, 1945, the set-aside for all mills was increased to 60 percent of the brown and milled rice produced each calendar

month. On March 10 it was increased to 100 percent, and rice millers were required to set aside all the milled rice they owned on March 10 and all they milled each month thereafter. Provision was made for the release of rice unacceptable to Government agencies upon notification by the Commodity Credit Corporation of nonacceptance of any rice offered in accordance with the order provisions. Only 32 petitions for relief were received, 25 being granted.

WFO 45, effective since April 1, 1943, was designed to assure a sufficient supply and the adequate distribution of beans to meet war and essential civilian needs. During the 1945 fiscal year amendment 5, effective August 10, 1944, issued August 9, was a complete revision of the original order. Effective September 5 another amendment adjusted the set-aside percentage to fit the supplies and requirements current at that time. Effective December 1 further amendment regrouped the various classes of beans and established new set-aside percentages to suit existing conditions.

During the fiscal year beans of the set-aside classes delivered to Government agencies (including the U. S. military services) amounted to approximately 3,700,000 bags, and to civilians approximately 7,100,000 bags. Of 167 petitions reviewed during the year, 155 were granted.

The corn-products industry allocated its products during the year, for both food and industrial use, to essential users without formal governmental control. At the request of the Government this industry increased its sugar and sirup production, to assist in meeting the deficit that resulted from a shortage of cane and beet sugar, by building additional sugar facilities and stepping up the production of sweetener products. During the last half of the fiscal year the industry, which at the beginning of the year had been unable to furnish the many sweetener products used by war industries because corn was in short supply, was able to run at near capacity and meet most of the essential requirements.

STANDARDIZATION, RESEARCH, AND MARKETING STUDIES

Revisions of the standards for hay and straw, effective September 1, 1944, made the standards more practicable for commercial use. The possibility of revising standards for rice and the various grains under the Grain Standards Act was studied.

During the year 120 hay samples taken in connection with hay-curing and feeding experiments were analyzed and graded for the agricultural experiment stations. Most of these samples were from barn-drying experiments. More than 100 lots of hay and straw used at the Beltsville Research Center at Beltsville, Md., were inspected.

A plan of work between the Bureau of Dairy Industry, the Bureau of Plant Industry, Soils, and Agricultural Engineering, and the Office of Marketing Services for the purposes of studying the comparison of field-cured, forced-ventilation, barn-cured, and ensiled forages and values as feed for dairy cattle was set up. Under the plan the OMS was to recommend sampling techniques; make leaf and stem separations; make mechanical determinations of the green crop, field-cured hays, barn-cured hays, and silages; grade the hays; and report on the quality factors in the silage.

A slight deterioration in the baking quality of wheat produced in an important winter-wheat area was discovered, and research was under-

taken to devise a method for properly classifying this wheat when it is offered for inspection.

In cooperation with the Bureau of Plant Industry, Soils, and Agricultural Engineering, milling, baking, and chemical tests were performed on approximately 500 samples of experimentally grown wheat of the classes White and Hard Red Spring. This was part of a broad wheat-breeding program aimed at developing and introducing superior varieties of wheat for the country's various wheat-growing areas. Also under the program, 150 samples of experimentally grown Durum wheat were milled into semolina, and disk color tests were made to measure the potential wheat quality in the production of macaroni products.

Standardization research, begun the previous year, provided the basis for establishing a hop inspection service for the 1944 crop.

INSPECTION AND GRADING

Inspection of rice, beans, peas, and hay, under permissive authority was again above normal in volume as a result of heavy production and Government purchase of these commodities. Inspectors, most of them licensed under cooperative agreement with State inspection departments, were able to handle these inspections promptly.

RICE

The number of rice inspections ran 25 percent greater than during the previous year, much of the increase resulting from milling tests on rough rice in California performed to enable growers and dealers to appraise rice for the purposes of OPA price ceilings. In the Southern States, much interest was shown in the inspection of low-grade milled rice to determine its acceptability for use under Government programs.

BEANS AND PEAS

To give prompt service in connection with the delivery out of warehouses, the inspection service was established at two new points—St. Louis and Peoria. Because of smaller production, inspections of beans at shipping points totaled somewhat fewer than during the previous year, although still above the average for the preceding 5 years. The 17,834 inspections of peas, covering more than 14 million 100-pound bags, were more than for any preceding year.

HAY

The number of inspections and the quantity of of hay inspected were much less than during the previous year, when a record 22,616 inspections were made of 519,499 tons. Most of the decrease resulted from the reduction in the number of inspections in California, where alfalfa hay sold below the OPA ceiling price and growers had little incentive to have their hay inspected.

HOPS

Inspection service for hops was begun. The hops are evaluated in terms of leaf, stem, and seed content. The service is operated in cooperation with the States of Oregon, Washington, California, and New York. OPA price regulations stipulated that the tests were necessary

to enable growers to sell their hops and receive the maximum price permitted. Inspection covered 245,300 bales, and required the issuance of 2,540 original inspection certificates. Conducted on a reimbursable basis with the cooperating States, the service was fully self-supporting.

INSPECTION OF GOVERNMENT PURCHASES

Inspection of flour, cereals, biscuits, crackers, cornstarch, corn sugar and sirup, edible oils, shortening, seeds, vitamins, and 100 other miscellaneous commodities for which regular peacetime inspection services were not available, was made to determine compliance with contract specifications when purchased by Government agencies. These inspections numbered more than 40,000, as compared with about 32,000 during the preceding year. The increase resulted largely from heavy purchases for the military forces and the assignment to OMS by the Army and Navy of additional commodities for inspection. Because a greater percentage of the inspections was for the armed services, and because special processes of manufacture and the exceptional or unusual types of containers used in preparing such shipments for overseas shipment require more time for inspection, the amount of time per inspection unit was also increased.

INSPECTION FOR CONDITION

OMS inspected for condition an increasing volume of commodities in storage for the account of CCC or WFA. Some of them required a Nation-wide survey of all warehouses where given commodities were stored. For example, surveys were made during the year on stored soy flour and shortening. Examinations for condition, also, were made of commodities sold by the Office of Supply subject to reconditioning. During the year OMS examined considerable quantities of ships' stores for the War Shipping Administration.

UNITED STATES GRAIN STANDARDS ACT

Grain inspections totaled nearly 2 million, almost the same as during the preceding year. The work was conducted under some handicaps but with few exceptions proceeded smoothly and generally the usual high degree of inspection efficiency was maintained. Appeals numbered about 15 percent more than in 1944, largely the result of difficulties in the inspection of high-moisture corn. Appeals filed totaled 59,024 but these represented less than 3 percent of all inspections. In deciding appeals, the grades previously assigned by the licensed inspectors were found to be correct in 61.9 percent of the cases.

A marked increase in the movement of grain for export necessitated greater emphasis on the supervision of inspection activities at Gulf and Atlantic seaboard markets.

FEDERAL SEED ACT

A shortage of administrative personnel and the increase of war activities reduced the number of investigations of apparent violations during the year to approximately half that of the preceding year. Approximately 80 percent of all cases investigated were reported by State officials, and these represented only the more severe violations of the Federal Seed Act.

The year brought the issuance of the first cease and desist order under the act. This order was confirmed some months later by the Federal Court of Appeals.

Uniform noxious-weed-seed requirements were developed in cooperation with the Bureau of Plant Industry, Soils, and Agricultural Engineering, State seed officials, and representatives of the seed industry.

Importation increased over the previous year by approximately 13 percent, bringing the total to approximately 75 million pounds—nearly double the volume of seed imported subject to Government control before the war. Approximately 8 million pounds of alfalfa seed were imported from Argentina. This was 12 percent of the total alfalfa seed supply, and exceeded by 4 million pounds the quantity imported from Argentina in any one year since imported alfalfa, which is generally not well adapted to the United States, has been required to be stained 10 percent red or orange red. The distribution and planting of this seed in Northern States where supplies were short may result in substantial winterkilling.

For many years low germination, resulting from excessive moisture in storage, had made the importation of Chewings fescue difficult. During the fiscal year 1945, New Zealand shippers succeeded in drying Chewings fescue seed to a safe moisture content. Throughout the season the seed arrived in the United States with high germination.

The increase in testing for purposes of the act became so burdensome to the cooperative Federal-State seed laboratories that a separate Federal seed laboratory was established in Kansas City and another was planned for Minneapolis. To conserve space and utilize necessary seed-testing equipment, research was conducted to develop an apparatus that could produce heatless light of desirable quality and so designed that it could be installed in testing chambers in common use.

Approximately 5,600 samples of seed purchased by the Government were tested.

Steps to develop uniformity in State seed certification progressed satisfactorily. Plans were made to establish committees composed of Federal, State, and commercial representatives, to advise on varietal nomenclature.

MARKET NEWS

The market news service continued to provide farmers, feeders, dairymen, and others with current information on market supplies and prices of grain, hay, feed, rice, hops, and beans. More than a million copies of the various reports and reviews were released from Washington and the seven field offices.

The operating responsibilities that during the previous year had been taken over by regional offices were returned to the Washington office, but the various weekly reviews continued to be prepared at and disseminated from the important market centers, and further progress was made in developing statistical background material on that basis.

A number of special quarterly market summaries were prepared, mostly in Washington, to supply a need for statistical and market information on some of the less commercially important grains. They were disseminated through the field offices to areas where the particular grain is important. Grains included were barley, oats, grain sorghums, rye, and flaxseed.

Reports on crop quality were prepared on the different grain crops as early in the season as reliable data could be obtained from inspection records, and the information was carried in the weekly grain market reviews. During the season of infestation, the reviews also carried information about the development and spread of stem rust, the information being compiled by cooperating specialists in the Bureau of Entomology and Plant Quarantine.

The feed market news work emphasized feeding ratios and the cost of representative dairy and poultry rations in different parts of the country. Feed supplies and their regional and seasonal distribution were covered, along with statistics compiled from original sources on the production of alfalfa meal and brewers' and distillers' grains. The weekly production of wheat millfeeds and the monthly production of linseed, soybean, and copra meals were calculated.

Under a Federal-State market news agreement made during the year, OMS was to undertake a limited market news service in Oregon on important field seeds, and in Alabama and Iowa general market information was to be furnished to market news agencies on grain, hay, and feed.

During the year the number of issues of market news reports on grain products totaled 1,993, with a total distribution of 1,039,601. Of the copies distributed, 71,134 were issued from Washington and 968,467 from the field offices.

LIVESTOCK, MEATS, AND WOOL

A monthly record of total slaughter and meat production in the United States was compiled for the first time. Under War Food Order 75 all slaughterers except farmers, a total of about 25,000, were required to submit monthly reports of their slaughter operations. Reports from the smaller slaughterers were assembled in the field, and State totals were submitted to Washington, where United States totals were compiled. At the same time, reports from about 1,150 slaughterers were received in Washington direct. The War Meat Board at Chicago received weekly reports from all federally inspected slaughterers and about 365 of the largest nonfederally inspected operators. These weekly figures formed the basis for current week-to-week estimates needed by the War Meat Board and the War Food Administrator, and later were adjusted to the more nearly complete monthly totals compiled at Washington.

On this information were based forecasts for as long as 18 months in advance, the development of War Food Orders, allocations to claimant agencies, production goals, rationing programs, support-price programs, orderly marketing programs, meat-purchase programs, and plans for transportation and storage. Other agencies used this information in connection with policies concerning price, production, distribution, and rationing.

The War Meat Board is an advisory agency set up in 1943 to achieve a balance between the supply of and demand for meat and meat products, and to bring together at one point representatives of all having an interest in the slaughtering, purchasing, distributing, and pricing of meats. During the year staff members of the Office of Marketing Services served as chairman, vice-chairman, and secretary of the board, which held 18 meetings. The board's greatest service was probably

the assistance it gave in connection with the meat set-aside orders, which enabled the armed forces and the Commodity Credit Corporation to procure their meat requirements.

FOOD-ORDER ADMINISTRATION

War Food Order 75 required all slaughterers except farmers to obtain a license to slaughter, to maintain certain minimum sanitary facilities, and to pay support prices for hogs. On April 29, 1945, the order was rewritten to discontinue the licensing provisions, to apply only to federally inspected slaughterers, and to require these slaughterers to submit monthly reports. As the year ended, OMS was receiving about 800 such reports. Monthly figures furnished to the Office of Price Administration from all other slaughterers were compiled by the Bureau of Agricultural Economics. In February 1945, before the order was rewritten, licensees who slaughtered under Federal inspection numbered 709, those who were nonfederally inspected slaughterers with quota bases of more than 2 million pounds a year numbered 365, and those who were nonfederally inspected slaughterers with quota bases of less than 2 million pounds a year numbered 26,260.

WFO 75.1, which defined the classes of slaughterers, accounting periods, and quota bases, and included conversion weights and the monthly reporting requirements, was terminated when control of nonfederally inspected slaughterers passed to OPA on April 29, 1945.

War Food Orders 75.2 and 75.2a in effect all year provided set-aside percentages of Army-style beef for all persons and establishments slaughtering more than 51 head per week. WFO 75.2 was amended effective October 15, providing that Cutter and Canner beef be set aside, and effective January 13 was amended to remove Utility beef from Army-style beef and require that it be set aside to be used for canning purposes. The order affected the slaughter of 5,606,403 head of cattle producing Army-style beef and 2,412,199 head of cattle producing Utility and Cutter and Canner beef.

Of 336 petitions for relief received in connection with the orders, 206 were granted.

WFO's 75.3 and 75.3a, effective September 2, 1944, provided for set-aside quantities of pork cuts and lard as percentages of the live weight of hogs slaughtered by federally inspected slaughterers. The provisions concerning pork cuts affected the slaughter of 40,671,000 head, and with respect to lard affected 17,998,000 head. Of 452 petitions received, 373 were granted.

WFO 75.4 became effective April 29, 1945, to provide for set-aside percentages of veal slaughter by federally inspected slaughterers. The order affected the slaughter of 644,856 head of calves. No petitions for relief were received.

WFO 75.5 became effective April 29, 1945, to provide for set-aside percentages of lamb slaughter by federally inspected slaughterers. It affected the slaughter of 2,666,630 head of lambs. No petitions were received.

WFO's 126, 126.1, and 126.2, in effect during March and April 1945, provided for the establishment of slaughter bases and percentages of 1944 slaughter for determining the maximum subsidy payments to be made to nonfederally inspected slaughterers. Of 762 petitions received

up to April 29, 1945, when control over nonfederally inspected slaughterers were transferred to OPA, 552 were granted.

Other OMS activities included the review of approximately 900 priority applications, 700 of which were approved.

WOOL-APPRAISAL PROGRAM

WFO 50, as amended, made the CCC the sole purchaser of domestic wool, both shorn and pulled, in the United States, Alaska, and Hawaii. United States wool merchants, dealers, cooperatives—designated as “handlers”—under a contract with CCC were allowed a commission for receiving, storing, grading, and eventually selling to the consumer. Actual appraisal was performed by various members of committees, each committee consisting of three experienced wool men composed of the area appraiser in charge and two members of the committee recruited from industry on a per diem basis.

Inasmuch as by far the most wool was appraised in the grease state, whereas the OPA price schedule was set up on a clean basis, the correct estimate of shrinkage was the key to the success of the whole program. A second factor necessary to its success was the constant checking and coordination of appraisals among areas of similar types of wool. A third factor was the necessity of teaching American wool producers to improve their packaging of wool and to know its value.

In previous years wool buying had been based on a flat grease price and the purchaser depended on his average price to show a profit against the current market. Under the 1945 program, each clip stood or fell on its own merits, and the variations in the grease price to producers resulting from variations in shrinkage were great.

Western growers continued in their tendency to have wools appraised in the West at country points rather than in the East. Another continued trend was the rapid decline in domestic production, indicated by a reduction in the amount of domestic wool shorn and pulled from 391,078,535 pounds in the fiscal year 1944 to 121,637,005 pounds in 1945. The volume of work for the various area offices did not decrease accordingly, however, because more country appraisal points had to be visited and almost as many individual lots had to be appraised as in 1944.

STANDARDIZATION

OMS conducted two extensive surveys of the grade correlation between the judgments of livestock market-news reporters and of official meat graders. Although the correlation was found to be rather high, further studies remained to be made in order to discover the exact adjustments that need to be made.

To develop a more accurate method for determining grades and maintaining the uniformity of beef grading throughout the country, OMS and the Bureau of Animal Industry undertook to determine the relation which exists between certain carcass measurements and the carcass grade as determined by OMS-employed meat graders. Data thus gathered are of sufficient volume to warrant definite conclusions.

Continued during the year was an analysis of data on hogs and hog carcasses, collected in cooperation with the Bureau of Animal Industry, and made for the purpose of developing a satisfactory system for the objective grading of hog carcasses.

OMS continued to demonstrate live-grading work in conjunction

with 4-H and Future Farmers of America livestock shows, fairs, and other similar gatherings, and in cooperation with the Bureau of Animal Industry it continued to assist in the grading of experimentally produced livestock and carcasses at the Beltsville Research Center, Beltsville, Md.

The core-sampling method of determining wool shrinkage was developed further. The purpose of this research is (1) to discover a method of sampling and testing wool whereby growers may have reliable and objective percentages of shrinkage on which to value their clips before marketing, and (2) to obtain industry acceptance of the method. Commercial scouring results on representative 10-bag lots of wool were made to ascertain the relationship between the mill yield, the yield based on appraisal estimates, and the yield based on core results. Thus, during the year a mass of data was accumulated reflecting on clips from all sections of the country (1) the official appraisal estimates of shrinkage, (2) the core-sample shrinkages, and (3) commercial shrinkages of 10-bag lots. These data have shown the core shrinkage method to be both practical of application and by far the most accurate means of shrinkage thus far available to the wool industry. Much work was done to improve the coring device, to improve the laboratory methods for determining impurities and clean-wool content, and to obtain better representation in the sampling process.

Wool and mohair standardization studies involved the preparation and distribution of practical forms of the official wool and wool-top standards, and research aimed at the development, maintenance, extension, and improvement of the standards. Seventy-nine units of the standards were sold for \$234, and 10 units were issued free. To facilitate research on the wool and wool-top grades, a study begun in the measurement of the master set of wool standards was continued in order to obtain additional data useful in defining the grades, to help replenish the stock, and to throw more light on application of the measurement procedure in different laboratories. Studies of the precision of wool-fiber measurements and the causes of operator differences were conducted in cooperation with the American Society for Testing Materials. Plans were laid for a comprehensive standardization to serve as the basis for promulgating standards for all the characteristics that affect wool value.

MEAT INSPECTION

From the 1944 all-time high in the number of animals slaughtered and the volume of meat and meat food products inspected, the fiscal year 1945 showed a decrease of 20.4 percent in the number of animals slaughtered and a decrease of 19.74 percent in the volume of meat and meat food products inspected. Inspections were conducted at 1,050 establishments located in 393 cities and towns.

The volume of meat and meat food products examined for condition and conformity with specifications for other Government agencies exceeded the 1944 record high by 34.08 percent.

Meat inspections of OMS (not including reinspections and certifications of meat and meat food products for export shipment and examinations of foreign meat and meat products at ports of entry throughout the year) are summarized in tables 5 to 10. Noninspected meat shipments by farmers, and meat shipments by butchers exempted from

inspection under certificates furnished by the inspection force, are reported in tables 11 and 12.

Examinations of 28,126 samples of meat, meat food products, and ingredients and substances used in their preparation were made at 7 meat-inspection laboratories. Of this number, adverse findings were made of 2,970 samples—a reduction of more than 18 percent from the findings during the previous year.

Approval was given of 12,365 new labels for use at inspected establishments and of 74 labels for meat and meat food products intended for importation. Because they did not comply with labeling requirements, 1,624 sketches and labels were returned without approval.

OMS received 748 sets of drawings and specifications of projects for new or remodeled structures or for major installations of equipment.

As the year ended, 547 slaughtering establishments (with or without meat processing) and 503 establishments engaged in meat processing only were under Federal inspection. Included in these were 72 establishments that slaughtered cattle only, for Army-style beef, and 79 that prepared fresh boneless meat under specifications for Government agencies.

Forty-four certificates of exemption from inspection were issued to retail butchers and dealers, and 52 were canceled. Certificates outstanding at the close of the year numbered 421.

TABLE 5.—Ante mortem and post mortem inspections of animals, fiscal year 1945

Kind of animal	Ante mortem inspection			Post mortem inspection		
	Passed	Suspected ¹	Condemned ²	Total	Passed	Condemned
	Number	Number	Number	Number	Number	Number
Cattle-----	14,399,447	120,392	8,969	14,528,808	14,437,810	80,709
Calves-----	7,657,193	12,116	7,748	7,677,057	7,616,082	51,074
Sheep and lambs-----	22,655,485	10,415	12,256	22,678,156	22,570,696	94,104
Goats-----	10,868	26	70	10,964	10,688	205
Swine-----	49,347,545	119,270	17,784	49,484,599	49,334,585	133,873
Horses ³ -----	59,546	128	95	59,769	58,370	1,304
Total-----	94,130,084	262,347	⁴ 46,922	94,439,353	94,028,231	361,269
						94,389,500

¹ "Suspected" is used to designate animals suspected of being affected with disease or condition that may cause condemnation in whole or in part on special post mortem inspection.

² For causes and additional condemnations see tables 6 to 8, inclusive.

³ Horses are slaughtered and their meat handled and prepared in establishments separate and apart from those in which cattle, calves, sheep, goats, and swine are slaughtered and their meat handled and prepared.

⁴ Includes 1,817 previously suspected animals which died in pens.

TABLE 6.—*Number of animals condemned for various diseases and conditions on ante mortem inspection, fiscal year 1945*

Cause of condemnation	Cattle	Calves	Sheep and lambs	Goats	Swine	Horses
Abscess.....			3		48	
Actinomycosis.....					1	
Arthritis and bone diseases.....					38	
Blackleg.....		5				
Emaciation.....	6	9			30	
Enteritis.....	2					
Hog cholera.....					427	
Immaturity.....		359				
Injuries.....	4		1		2	
Mastitis.....	1					
Metritis.....	6					
Moribund ¹	7, 484	7, 349	12, 215	70	17, 051	93
Pneumonia.....	7	4			7	
Pregnancy and recent parturition.....	4					
Pyrexia.....		16	32		131	
Rabies.....	2					
Septicemia and pyemia.....	5	4	4		48	
Tetanus.....	1	1				2
Toxemia.....	1		1			
Tumors, carcinomata, sarcomata, etc.....	1, 446	1			1	
Total.....	8, 969	7, 748	12, 256	70	17, 784	95

¹ Includes animals found dead in the ante mortem pens at time of inspection.

TABLE 7.—*Number of carcasses condemned for various diseases and conditions on post mortem inspection, fiscal year 1945*

Cause of condemnation	Cattle	Calves	Sheep and lambs	Goats	Swine	Horses
Arthritis.....	286	927	1, 196		18, 299	
Asphyxia.....	7	11	60		880	
Bone conditions.....	55	3	5		578	
Contamination.....	18	16	19		3, 483	
Degenerative and dropsical conditions:						
Anasarca.....	77	3			4	2
Emaciation.....	12, 520	8, 301	30, 868	147	348	301
Hydropic degeneiation.....	59	2	20		168	
Not otherwise classified.....			1		225	
Icterus.....	289	915	4, 110	1	8, 709	1
Immaturity.....		25, 707	68		4	12
Infectious diseases:						
Actinobacillosis and actinomycosis.....	913	47	1		3	
Anaplasmosis.....	234	13				
Anthrax.....	34				91	
Blackleg.....	3	6			1	
Brucellosis.....					18	
Caseous lymphadenitis.....			16, 263	10		
Coccidioidal granuloma.....	2					
Hog cholera.....					10, 209	
Swine erysipelas.....					3, 242	
Tuberculosis.....	2, 089	30	60		12, 445	1
Not otherwise classified.....	24	7	1		28	24

TABLE 7.—*Number of carcasses condemned for various diseases and conditions on post mortem inspection, fiscal year 1945—Continued*

Cause of condemnation	Cattle	Calves	Sheep and lambs	Goats	Swine	Horses
Inflammatory conditions:						
Enteritis, gastritis, peritonitis	3, 683	2, 574	780	-----	6, 150	29
Mastitis	3, 064	-----	14	-----	-----	-----
Metritis	5, 311	18	547	1	1, 007	11
Nephritis	3, 539	361	560	1	1, 537	18
Pericarditis	5, 453	108	174	-----	616	1
Pneumonia and pleurisy	14, 436	7, 879	27, 171	21	24, 063	604
Not otherwise classified	960	334	68	-----	118	29
Injuries	5, 342	885	2, 777	7	2, 996	18
Neoplasms, malignant:						
Carcinoma	985	12	47	-----	101	5
Epithelioma of the eye	2, 704	5	1	-----	-----	-----
Lymphoma, leukemia	1, 475	69	33	-----	287	2
Sarcoma	868	9	31	-----	180	8
Not otherwise classified	1, 014	21	102	-----	347	15
Parasitic conditions:						
Cysticercosis	213	23	1, 036	-----	18	2
Stephanuriasis	1	-----	-----	-----	1, 080	-----
Not otherwise classified	416	3	119	-----	102	-----
Pigmentary conditions:						
Melanosis (nonmalignant)	76	113	172	-----	239	116
Xanthosis	13	-----	4	-----	6	-----
Not otherwise classified	8	4	1	-----	8	-----
Pregnancy and recent parturition	39	-----	12	-----	7	-----
Septic conditions:						
Pyemia (including abscesses)	7, 776	1, 013	3, 042	8	18, 657	35
Septicemia	6, 242	1, 606	3, 215	2	12, 345	69
Toxemia	80	3	23	-----	131	-----
Not otherwise classified	11	-----	3	-----	38	-----
Sexual odor	1	-----	1	7	4, 837	-----
Skin conditions	3	1	-----	-----	17	-----
Uremia	384	44	1, 497	-----	250	1
Miscellaneous	2	1	2	-----	1	-----
Total	80, 709	51, 074	94, 104	205	133, 873	1, 304

TABLE 8.—*Number of parts of carcasses¹ condemned for various diseases and conditions on post mortem inspection, fiscal year 1945*

Cause of condemnation	Parts of carcasses of—				
	Cattle	Calves	Sheep and lambs	Swine	Horses
Actinomycosis and actinobacillosis	219, 917	8, 012	2	2	-----
Arthritis and bone diseases	73	9	5	271	7
Cellulitis	65	8	-----	238	-----
Contamination	284	569	4	2, 812	-----
Degenerative diseases	8	-----	-----	1	-----
Dropsical diseases	11	3	-----	-----	-----
Injuries	2, 027	200	129	47, 661	53
Melanosis	30	18	-----	1	103
Parasitic diseases	42	-----	-----	-----	-----
Tuberculosis	2, 303	164	-----	236, 378	-----
Tumors and abscesses	32, 545	5, 272	250	662, 551	3, 072
Xanthosis	15	-----	-----	-----	-----
Total	257, 320	14, 255	390	949, 915	3, 235

¹ In addition to the above parts, 1,579,162 cattle livers and 83,713 calf livers were condemned on post mortem inspection for abscess, distoma, "sawdust," telangiectasis, and other diseases and conditions.

TABLE 9.—*Meat and meat food products prepared and processed under supervision, fiscal year 1945*¹

Product	Quantity
Placed in cure:	<i>Pounds</i>
Beef-----	105, 995, 196
Pork-----	2, 806, 340, 563
Smoked and/or dried:	
Beef-----	57, 599, 760
Pork-----	1, 832, 666, 162
Sausage:	
Fresh, finished-----	482, 693, 309
Smoked and/or cooked-----	1, 101, 017, 588
To be dried or semidried-----	145, 436, 630
Loaf, headcheese, chili con carne, jellied products, etc-----	238, 704, 866
Cooked meat:	
Beef-----	32, 001, 488
Pork-----	369, 791, 177
Canned meat and meat food products:	
Beef-----	233, 604, 900
Pork-----	905, 938, 896
Sausage-----	210, 943, 237
Soup-----	292, 735, 653
All other-----	714, 455, 038
Bacon, sliced-----	454, 974, 882
Lard:	
Rendered-----	1, 424, 657, 052
Refined-----	1, 163, 382, 544
Rendered pork fat:	
Rendered-----	143, 801, 698
Refined-----	86, 624, 177
Oleo stock-----	121, 405, 231
Edible tallow-----	93, 696, 990
Compound containing animal fat-----	275, 478, 903
Oleomargarine containing animal fat-----	49, 645, 183
Miscellaneous-----	55, 700, 235
Horse meat:	
Placed in cure-----	814, 834
Chopped-----	8, 871, 887
Total-----	² 13, 408, 978, 079

¹ The following quantities of meat and meat food products were condemned on reinspection and destroyed for food purposes on account of having become sour, tainted, rancid, unclean, or otherwise unfit for human food: Beef, 3,592,189 pounds; pork, 7,211,505 pounds; mutton, 149,909 pounds; veal, 77,775 pounds; goat meat, 150 pounds; horse meat, 25,895 pounds; total, 11,057,423 pounds.

² This figure represents inspection pounds. Some of the products may have been inspected and recorded more than once on account of their having been subjected to more than one processing treatment such as curing first and then canning.

TABLE 10.—*Quantities of meat and meat food products examined for condition and conformance to specifications for other Government agencies, fiscal year 1945*

Branch of Government	Passed	Rejected
	<i>Pounds</i>	<i>Pounds</i>
Navy Department-----	627, 869, 204	4, 029, 048
Commodity Credit Corporation-----	423, 624, 329	1, 537, 279
Coast Guard-----	17, 106, 490	124, 850
War Shipping Administration: Division of Training-----	4, 010, 298	154, 188

TABLE 10.—Quantities of meal and meat food products examined for condition and conformance to specifications for other Government agencies, fiscal year 1945—Con.

Branch of Government	Passed	Rejected
	<i>Pounds</i>	<i>Pounds</i>
Department of the Interior:		
Alaska Railroad.....	635, 856	8, 115
Alaska Road Commission.....	5, 692	-----
Fish and Wildlife Service.....	4, 301	-----
Office of Indian Affairs.....	2, 669	-----
Veterans' Administration: Supply Service.....	565, 981	2, 153
Maritime Commission.....	504, 459	71, 227
Marine Corps.....	295, 651	18, 327
War Department: Army Engineers.....	181, 410	578
Civilian Food Reserve.....	138, 333	5, 133
Department of Justice: Bureau of Prisons.....	107, 717	163
Federal Security Agency: Public Health Service.....	885	-----
Total.....	1, 075, 053, 275	5, 951, 061

TABLE 11.—Shipments of farm-slaughtered meat and meat food products, fiscal year 1945¹

Product	Carcasses	Quantity
	<i>Number</i>	<i>Pounds</i>
Cattle (240 quarters).....	60	23, 403
Calves.....	2, 923	122, 927
Sheep and lambs.....	102	3, 331
Goats and kids.....	152	2, 572
Swine.....	82	11, 063
Fresh meats:		
Beef.....	-----	35, 660
Veal.....	-----	23, 392
Mutton and lamb.....	-----	3, 595
Pork.....	-----	66, 980
Cured meat, sausage, lard, and miscellaneous meat food products.....	-----	678, 998
Total.....	3, 319	971, 921

¹ Under certain provisions of the meat inspection law, shipments of meat of animals slaughtered by farmers on farms, and meat shipped by retail butchers and retail dealers supplying their customers outside of the State, are exempted from inspection although such shipments are required to be reported.

TABLE 12.—Meat and meat food shipments by retail butchers and retail dealers under certificates of exemption, fiscal year 1945¹

Product	Carcasses	Quantity
	<i>Number</i>	<i>Pounds</i>
Cattle (2,110 quarters).....	522	335, 331
Calves.....	201	24, 845
Sheep and lambs.....	36	2, 265
Swine.....	19	2, 919
Fresh meats:		
Beef.....	-----	1, 300, 652
Veal.....	-----	197, 367
Mutton and lamb.....	-----	319, 457
Pork.....	-----	424, 499
Cured meat, sausage, lard, and miscellaneous meat food products.....	-----	1, 843, 895
Total.....	778	4, 451, 230

¹ Under certain provisions of the meat inspection law, shipments of meat of animals slaughtered by farmers on farms, and meats shipped by retail butchers and retail dealers supplying their customers outside of the State, are exempted from inspection although such shipments are required to be reported.

(Data on meat and meat food products certified for export and on inspection of meat and meat food products offered for entry into the United States were still being compiled, as before the war, but their publication was necessarily withheld.)

MEAT GRADING

Although the 12.7 billion-pound volume of meat and meat products graded and certified was 600 million pounds less than in 1944, it almost doubled that of any other previous year. The volume decline resulted from the great reduction in the number of hogs slaughtered and the cessation of CCC meat-purchase activities late in the fiscal year. Grading work was of two kinds—commercial grading and CCC grading.

Commercial grading consists of grading carcasses of beef, veal, lamb, and mutton according to U. S. standards and applying the official grade stamp to the carcasses. Under OPA price regulations, the grading, permissive in normal times, was mandatory as a price control and compliance criterion. During the year the service was extended into a number of new territories and the volume of meat graded was 11,232,212,000 pounds as compared with 10,002,298,000 pounds in 1944. Appeals from the graders' decisions were fewer than those filed last year. (See table 13.)

CCC grading consisted of expert examination for compliance with purchase-contract specifications and certification and acceptance of the product as the basis for payment on lend-lease account. Following a high rate of CCC purchase early in the year, the volume decreased to practically nothing during the last few months and the total poundage was 1,462,468,000 pounds as compared with 3,242,675,000 pounds in 1944. (See table 14.)

TABLE 13.—*Meats, meat food products, and byproducts regularly graded, certified, and accepted, fiscal year 1945*¹

Item	1942	1943	1944	1945 ²
	<i>1,000 pounds</i>	<i>1,000 pounds</i>	<i>1,000 pounds</i>	<i>1,000 pounds</i>
Fresh and frozen beef-----	919, 993	3, 812, 544	7, 844, 370	8, 669, 128
Veal and calf-----	9, 906	335, 949	1, 023, 643	1, 446, 592
Lamb-----	33, 202	242, 708	835, 037	805, 257
Yearling mutton and mutton-----	2, 736	35, 419	246, 391	220, 197
Pork-----	7, 253	5, 302	13, 142	25, 424
Cured beef-----	2, 002	1, 090	2, 609	3, 916
Cured pork-----	10, 506	6, 531	17, 863	31, 344
Sausage-----	7, 545	6, 397	11, 865	18, 920
Lard-----	1, 405	940	1, 836	2, 933
Lard substitutes-----	247	227	793	1, 901
Miscellaneous meats ³ -----	4, 130	1, 938	4, 749	6, 600
Total accepted ¹ -----	998, 925	4, 449, 045	10, 002, 298	11, 232, 212

¹ Excludes CCC (Federal Surplus Commodities Corporation) gradings. Totals based on unrounded numbers.

² May and June estimated.

³ Excluded are 5,752,755 pounds of poultry and game, 6,426,710 pounds of fish, and considerable quantities of dairy products.

TABLE 14.—Meats, meat products, and byproducts certified and accepted for Commodity Credit Corporation (Federal Surplus Commodities Corporation)

Item	Fiscal year ended June 30		
	1943	1944	1945 ¹
	1,000 pounds	1,000 pounds	1,000 pounds
Fresh pork products-----	184, 141	615, 399	304, 670
Cured meats-----	473, 630	483, 387	269, 494
Canned meats ² -----	1, 051, 276	705, 058	418, 995
Lard and lard substitutes-----	625, 554	1, 070, 049	390, 543
Oleomargarine-----	109, 253	193, 574	26, 771
Calf's-foot jelly-----	25		
Oleo oil-----	10, 121	2, 464	
Fresh beef-----	11, 134	33, 862	7, 044
Beef suet-----	895	578	1, 544
Veal-----	5, 680	33, 233	10, 278
Lamb and mutton-----	79, 998	102, 909	33, 129
Edible tallow-----	25, 635	2, 162	
Total-----	2, 577, 542	3, 242, 675	1, 462, 468
Hog casings—bundles-----	3, 261	4, 449	3, 002
Beef bungs—pieces-----	5		

¹ May and June estimated.
² Includes dehydrated beef and pork.

Work in grading and specification examinations was conducted from 66 main stations and 150 substations. The number of graders increased from 683 in 1944 to 716 in 1945. National and regional grader supervisors, with the assistance of numerous area supervisors, were fully occupied in maintaining uniformity in the application of grade standards.

Special activities included the occasional reexamination and reconditioning of warehouse stocks of meat and meat food products prior to shipment by rail or boat into lend-lease channels; assistance on compliance work to OPA agents throughout the country; and quality- and specification-examining work at the request of cooperating organizations covering 5,752,000 pounds of poultry and game, 6,426,710 pounds of fish, and considerable quantities of dairy products.

DISTRIBUTION OF BEEF GRADED ACCORDING TO U. S. GRADES

There have not been sufficient data collected on the grade distribution of classes of meat, other than beef, to give reliable information on such distribution. Table 15 gives the volume of beef in each grade and the percentage distribution by grades.

TABLE 15.—Beef officially graded, by grades, calendar years 1941-44 ¹

Grade	1941	1942	1943	1944	1941	1942	1943	1944
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Percent	Percent	Percent	Percent
Prime-----	13, 419	439, 831	1, 297, 422	865, 128	{ 1. 7 } 39. 0	29. 7	19. 4	10. 4
Choice-----	308, 234							
Good-----	343, 189	560, 304	2, 081, 209	2, 328, 591	43. 5	37. 9	31. 1	28. 0
Commercial-----	85, 894	284, 083	1, 544, 675	2, 104, 295	10. 9	19. 2	23. 1	25. 3
Utility-----	26, 254	172, 991	983, 849	1, 560, 107	3. 3	11. 7	14. 7	18. 7
Cutter-----	9, 584	14, 118	785, 013	1, 469, 778	{ 1. 2 } . 4	1. 0	11. 7	17. 6
Canner-----	3, 201	6, 857						
Not specified-----	120	284	71		. 0	. 0	. 0	
Total-----	789, 984	1, 478, 468	6, 692, 239	8, 327, 899				

¹ The 1944 tonnage of beef graded shows an increase of 1,635,658,000 pounds (dressed weight), or an increase of 24 percent over the 1943 total.

PACKERS AND STOCKYARDS ACT

The Packers and Stockyards Act involves supervision over the operation of packers, stockyards companies, market agencies, dealers in livestock, and licensees handling live poultry in commerce, and the regulation of rates and charges for services at stockyards and designated poultry markets.

At the beginning of the year, 57 formal dockets were pending. During the year 84 cases were begun or reopened and 95 cases were disposed of; as the year ended 46 were pending. Eight cases were tried in Federal Court. Respondents challenged the legality of 5 orders issued against them for violation of the act. Table 16 shows the agencies and persons registered under the act during the fiscal years 1944 and 1945.

During the year no stockyards were posted and 6 were deposted. An additional 258 market agencies and 422 dealers were registered, and 193 market agencies and 469 dealers were placed on the inactive list. In the live poultry markets 97 new licenses were issued and 4 restored; 137 became inactive. Sixty-two packers were added to the jurisdictional list, 31 were deducted, and 2 were transferred.

A total of 1,040 tariffs, with supplements and amendments, were disposed of by filing, issuance of suspension orders, withdrawal, or rejection.

The amount of the bond coverage of market agencies and dealers showed little change.

As a result of modification of orders in formal rate cases, negotiations, informal stipulations, and refusal to file increased charges until the applicant made a convincing showing that a rate increase was necessary to keep him from going out of business, savings to market patrons affected totaled about \$361,000 per annum. Cases included Sioux City Stock Yards, \$220,000; San Antonio market agencies, \$53,000; Dodge City auction market, \$27,000; Milwaukee market agencies, \$20,000.

TABLE 16.—*Agencies and persons registered under the Packers and Stockyards Act, 1943 and 1944 fiscal years*

Fiscal year ended—	Stockyards posted	Market agencies registered	Dealers registered	Packers under supervision	Poultry licensees
	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
June 30, 1944-----	202	1, 907	2, 553	1, 301	1, 574
June 30, 1945-----	196	1, 972	2, 506	1, 332	1, 538

Nine informal rate stipulations were extended, one new stipulation was entered into, one stipulation was revised, and a study of the commission rates in one market resulted in a rate reduction.

OMS valuation engineers concluded appraisal reports on two stockyards and made new field investigations, structural appraisals, and land appraisals of seven stockyards. Reports on services and facilities and the use of properties were prepared on these seven markets and three other markets.

An extensive trade-practice program, one part of which called for auditing the records of all market agencies and dealers subject to the act, was well under way at the close of the year and was producing

good results. During the year, 404 financial and trade-practice audits were made of the records of registered commission firms. Large-scale investigations of the activities of dealer-speculators at 3 of the large terminal markets, begun during the year, were expected to result in formal actions. Forty-one disciplinary complaints, alleging unfair practices by licensees or registrants, were issued. Greater-than-ordinary use of the stipulative method of disposing of less serious violations was continued, 38 stipulations being approved.

Informal complaints disposed of numbered 520, as compared with 643 during the previous year. As a result, shippers and others received \$13,225.29 without the necessity of filing formal complaints and attending hearings.

Tests of scales at posted stockyards numbered 1,930, compared with 2,600 in 1944.

Audits made under the act totaled 466, compared with 380.

MARKET NEWS

Demand for current and historical price-and-receipts information about livestock and meats was greater than ever. This resulted from augmented slaughter and ceiling-price controls brought about by somewhat diminished total volume of livestock marketings and the increasing demands of consumers, the armed services, and lend-lease recipients for meat and meat food products.

Regular reporting services, which cover price-and-receipts information by grades for the movement of livestock from farms and ranches to slaughtering plants and feed lots, were supplied throughout the year at 28 major terminal livestock markets and in 3 major direct-trading areas. Supplies and trade conditions of wholesale meat trade centers were reported at 5 large meat centers, and the wool trade was reported from the Boston market.

Information was spread by every practical means of communication. Twenty-three of the Nation's largest livestock markets had instantaneous between-market communication from about 6 a. m. to midafternoon. To provide for rapid dissemination of information, a service was maintained over about 8,600 miles of leased wire. To extend this distribution greatly, use was made of reports, bulletins, trade journals, the telephone and radio, and of press associations and commercial wire companies. More than 460 radio stations broadcast reports from 1 to 5 times a day and most of the Corn Belt stations broadcast the livestock market news 3 to 5 times a day. Some 5,475,000 daily and weekly mimeographed reports were supplied free to about 17,500 persons and firms.

The market news reporter's job was unusually difficult in 1945 because of influences (not found in the normal competitive market) resulting from the wide range of prices and the various factors affecting the market under price and slaughter restrictions and subsidy payments.

To cope with excessive hog supplies, market news offices worked closely with the special hog-marketing committees set up in the Corn Belt to direct a more orderly flow of hogs to market. Later in the year—after the rapid decline in hog receipts and when demand far exceeded supply—the emphasis in market news information shifted from price to supply in relation to demand.

Accurate reporting of sheep and lamb markets was made more

difficult by the wide price range resulting from the increased rate of marketing and the lack of ceiling prices, and by the many value factors peculiar to sheep and lambs.

The offices at Baltimore, Los Angeles, Montgomery, Nashville, Ogden, San Antonio, San Francisco, and South St. Paul were operated cooperatively with State departments of agriculture. The Florida and Alabama services emanated from the Thomasville, Ga., office and were conducted in cooperation with the Florida and Alabama Departments of Agriculture, respectively.

SUGAR

Legislation which was enacted in June of 1944 extended the Sugar Act of 1937 for another 2 years without change and provided part of the authority needed under wartime conditions to continue price-support and assistance programs designed to provide sufficient income and assistance to growers to encourage sugar production. Since April 13, 1942, the quota provisions of the act have been in suspense by Presidential proclamation. Accordingly, in recent years there have been no governmental restrictions on sugar production, either in the continental or offshore areas of the United States, and emergency programs to encourage increased sugar production have been made effective.

MINIMUM WAGES ESTABLISHED FOR FIELD WORKERS

"Fair and reasonable" wage rates, to be paid by sugar-beet and sugarcane growers as one of the conditions for payments under the Sugar Act, were established during the year for all the domestic sugar-producing areas. As in 1944, owing to competition for the short supply of labor, wages higher than the basic levels set forth in the wage determinations issued under the act were paid. Accordingly, instead of serving as prevailing wages, as in prewar years, the prescribed rates provided a protective minimum and served as a stabilizing factor.

Since the price growers were to receive for the 1945 crop of sugar beets was not expected to differ from that received for the 1944 crop, only minor adjustments were made in the 1945 wage determination. These adjustments were made to meet certain problems raised at the public hearings and problems of labor recruitment. Voluntary bonus systems placed in effect in 1945 will increase laborers' earnings substantially. In many parts of the beet area the prevailing wages, with or without a bonus, are somewhat higher than the minimum rates required by the determination.

Substantial wage increases had taken place in Louisiana in 1943, and no further increases were required under the wage determination issued in connection with the 1944 harvest, even though grower income was increased. The use of mechanical-harvesting equipment and an easing of the labor problem diminished the need for wage rates above the minimum levels required to qualify for conditional payments. Consequently, the wages paid in the 1944 harvest more nearly reflected the prewar wage-income relationship than did those of 1943. Cultivation wage rates for Louisiana in 1945 were increased 13 percent over 1944, which action reflected the increased income of producers from Federal payments.

During production of the last two crops, Florida growers were compelled by a severe labor shortage to pay wages considerably higher than the minimum rates provided in the determinations. The 1944 wage determination for this area established day wages at a level about 17 percent higher than for 1942, the last previous year for which specific rates were determined. Other changes included a simplification of the wage scale, which now more adequately meets the requirements of this area. Except for that portion of the 1944 crop harvested after February 22, 1945, no wartime subsidy payment was made to Florida growers for the 1944 crop. Cultivation rates for Florida for 1945 were increased by 20 percent, as compared with 1944. The increase reflects the increased income which will result from the subsidy payment to be made for the first time in that area on a full crop.

Because a thorough readjustment of the basic wage rates in Puerto Rico was made in 1944, and because the determination included a provision for automatic wage increases in the event of price increases, no changes were made in the 1945 wage determination for this area. Federal price-support payments made to growers were required to be shared with laborers.

The 1945 determination for Hawaii excluded many of the detailed provisions contained in former determinations and established a simple hourly wage per worker at a level about 15 percent above the required 1944 rate. In addition to receiving the required minimum hourly rate, laborers are assured a voluntary bonus payment by producers based on any increase in the price of sugar not taken into consideration in the basic wage-income relationship.

In the Virgin Islands, cane workers' earnings were improved by increasing the required wage rates for 1945 about 18 percent to reflect the increased income of producers resulting from Federal subsidies.

Sugar production in the continental United States has declined during recent years largely because sugar crops require much labor and because some farmers have preferred to grow other crops also needed during wartime. The War Food Administration helped to reduce the labor difficulties by bringing here thousands of laborers from foreign countries and moving American laborers from place to place within this country.

SOIL-CONSERVING PRACTICES

The farming practices required of growers of sugar beets and sugarcane in Louisiana, Hawaii, and the Virgin Islands as a condition for payment under the Sugar Act were identical with those for the preceding year. On the recommendation of the Florida State Agricultural Conservation Committee, the practices of turning under sorghum as a green manure and as a cover crop were added for 1945. For Puerto Rico, the farming practices specified for 1945 represented an increase in the fertilizer requirements that were in effect for the 1944 crop. Increased supplies of fertilizer and an improvement in shipping facilities led to a return of requirements to the prewar levels contained in the 1941-42 determinations. Estimated gross conditional payments to producers under the act are shown in table 17 for the 1944 program.

OTHER DETERMINATIONS

The determinations of proportionate shares for sugar-beet and sugarcane growers for the 1945 crop continued in effect the wartime

policy of unlimited production. Public hearings were held in all domestic areas during the year on the "fair and reasonable price" condition of payment, under the Sugar Act, which applies solely to producer-processors of sugar beets or sugarcane who buy beets or cane from other growers. This condition requires them to pay for the purchased cane or beets not less than the prices deemed "fair and reasonable" by the Secretary of Agriculture after public hearing and investigation. The determinations issued during the year followed closely those of prior years.

TABLE 17.—Estimated conditional payments to producers, under the Sugar Act of 1937, 1944 program ¹

Area	Dollars	Area	Dollars
SUGAR-BEET STATES		SUGAR-BEET STATES—CON.	
California.....	3, 114, 000	Wisconsin.....	303, 000
Colorado.....	4, 026, 000	Wyoming.....	853, 000
Idaho.....	1, 663, 000	Total.....	18, 633, 000
Illinois.....	28, 000	SUGARCANE STATES	
Indiana.....	5, 000	Florida.....	700, 000
Iowa.....	17, 000	Louisiana.....	6, 040, 000
Kansas.....	119, 000	Total.....	6, 740, 000
Michigan.....	1, 449, 000	SUGARCANE INSULAR REGION	
Minnesota.....	720, 000	Hawaii.....	8, 211, 000
Montana.....	1, 978, 000	Puerto Rico.....	12, 100, 000
Nebraska.....	1, 394, 000	Virgin Islands.....	75, 000
New Mexico.....	3, 000	Total.....	20, 386, 000
North Dakota.....	416, 000	Grand total.....	47, 759, 000
Ohio.....	338, 000		
Oregon.....	497, 000		
South Dakota.....	123, 000		
Texas.....	3, 000		
Utah.....	1, 059, 000		
Washington.....	525, 000		

¹ Include acreage-abandonment and crop deficiency payments.

SPECIAL WARTIME ACTIVITIES

The raw sugar allotment order WFO 7.1, which established raw sugar allotments for cane-sugar refiners in the continental United States, was terminated August 17, 1944. But under WFO 7, which was continued, an endeavor was made to direct the movement of raw-sugar supplies so as to maintain, so far as was practicable, the historical relation between the volume of meltings of the various refiners. WFO 7 specified that the purchase, importation, or acceptance of raw sugar by refiners must be specifically authorized by the War Food Administration.

On June 13, 1945, the War Food Administrator announced the issuance of WFO 131, which provided for controlled distribution of sugar by cane-sugar refiners, beet-sugar processors, importers of direct-consumption sugar, and mainland direct-consumption cane-sugar producers. This order authorized the fixing of distribution quotas for all primary distributors of sugar. These quotas were designed to control the release of sugar by primary distributors, in order to make sure actual distribution would be consistent with the alloca-

tions of the War Food Administration to all claimants of the United States supply. Sugar allocated for civilian use continued to be distributed through the ration regulations of the Office of Price Administration. WFO 131.1 established the distribution quotas for primary distributors for the period April 1 to September 30, 1945.

Continued assistance was given the continental and insular sugar industry in obtaining the processing equipment needed to operate efficiently and at the highest possible production level. All priority applications for sugar processing equipment received by the War Production Board were reviewed, and recommendations of approval or denial were made.

So that domestic production of sugar could be increased a limitation under War Production Board Order M-54 on the quantities of beet sugar molasses which could be desugarized was eliminated. The order was originally placed in effect to insure that the yeast and citric-acid industries would have sufficient supplies to meet the reasonable needs for those products.

The detailed figures on domestic-sugar production, processing, meltings, and the distribution of stocks, which WFA gathered under authority of the Sugar Act of 1937, continued to furnish the statistical basis for OPA's sugar-rationing program, for sugar allocations by WFA among the various Federal agencies that are claimants for domestic or foreign account, and for other uses.

The use of sirup and edible molasses increased somewhat in 1944, but WFO 51 substantially held in check a larger potential use. This order was essential in preventing an undue diversion from the production of sugar to sirup and molasses and in keeping these products in legitimate channels of trade. Increase in use is reflected in the 10 percent increase in basic quotas, which became effective October 1, 1943, and in specific authorizations granted to relieve hardship cases and to permit the use of increased importations.

Commercial use of sirups and edible molasses by reporting blenders and food manufacturers during the calendar year 1944 amounted to 35,269,000 gallons distributed as follows: Refiners' sirup, 15,320,000 gallons; sirup of cane juice, 6,356,000 gallons; first and second molasses, 7,317,000 gallons; edible blackstrap, 6,276,000 gallons. Stocks of all types, except blackstrap, held by producers, distributors, and commercial users declined from 15,112,000 to 14,194,000 gallons, a decrease of 918,000 gallons.

TOBACCO

Recommendations on priorities for construction and maintenance made by the Office of Marketing Services totaled 4½ million dollars. Recommendations on allocations involved critical materials for constructing tobacco-processing and manufacturing equipment and containers, for lumber and plywood to be used in the construction of hogsheads, boxes, and other containers; for pyrethrum to control tobacco moths, and for glycerin, sugar, and other ingredients required in tobacco-manufacturing processes. Until General Imports Order M-63 was amended on July 11, 1944, recommendations were made on licenses to be issued to tobacco importers, and throughout the year recommendations were made on quotas and ship ratings for the importation of tobacco from different countries. OMS received from various Government agencies for investigation and recommendation a large number of appeal cases in connection with buildings, equipment, and sup-

plies. Most of them dealt with relief under Limitation Order L-292, which until amended on May 15, 1945, prohibited the building of any new tobacco-processing machinery and equipment (including wrapping machinery), and with appeals for containers in which to distribute manufactured products under the quota restrictions of L-317.

ORDER ADMINISTRATION AND ECONOMIC RESEARCH

WFO 4.6, issued June 13, 1944, was designed to effect an equitable distribution of the 1944 crop of cigar filler and binder tobacco by prohibiting sales until the usual marketing season opened. Before the order was issued, highly speculative operations in the form of future purchasing had begun. Tobacco was being bought in the field immediately after transplanting. The risk of judging the final yield and quality of the crop was prohibitive to numerous small or poorly financed manufacturers.

WFO 4.7, issued July 18, 1944, gave assurance that a sizeable proportion of the flue-cured tobacco crop would be available for export and that the remainder would be distributed equitably among domestic users.

The supply of flue-cured tobacco was relatively short in relation to domestic and export demands. A large part of this tobacco ordinarily is exported, and in view of the domestic demand it appeared that the quantity exported would be reduced considerably below minimum requirements unless the crop was allocated. This would have endangered the future United States export market. From the domestic point of view, allocations were desirable as a means of equitably allocating tobacco among the various users. Domestic demand and market pressure had been increased by the unusual expansion of cigarette production. The Combined Food Board recommended a break-down of the 1943 crop as between domestic users and exports. It appeared that export requirements from the 1944 crop were provided for through WFO 4.7; consequently, the Combined Food Board did not make recommendations with respect to 1944 allocations.

Under the order, all purchasers of flue-cured tobacco were limited in the quantities they could acquire from the crop. The portion of the crop designed for export to the United Kingdom was allocated to the Commodity Credit Corporation, which in turn placed buying orders with dealers for the amount of their allocations.

Flue-cured tobacco was allocated to domestic manufacturers according to the quantity they had used for manufacture during the most recent 12-month period. Manufacturers were limited in their purchases at auction and from dealers to the same proportion of total purchases as that acquired from these sources from the crops of 1939 through 1942. Dealers' purchases were allocated on the basis of the flue-cured tobacco they bought from the 1939-42 crops.

Under this arrangement, if an individual manufacturer's buying record indicated that he had bought 50 percent of his requirements at auction during the base period, then 50 percent of his allocation was for purchase at auction and the other 50 percent was for purchase from dealers.

Qualifying for allocations were 87 dealers and 36 manufacturers. OMS handled 63 petitions for relief.

WFO 4.8, effective December 1, 1944, was issued to assure equitable distribution of the 1944 crop of burley tobacco. Prices established

by the Office of Price Administration on burley tobacco were based on Federal grades. Since all bidders usually bid the ceiling price, it was impossible to tell who was the highest bidder. The practical effect of this situation was an allocation of the crop by the warehouseman or auctioneer. Since maldistribution would have worked a hardship on many companies, the industry requested a crop allocation.

The order limited the quantities of tobacco that dealers and manufacturers could purchase. Allocations to dealers were based on the quantities purchased during a representative base period and those to manufacturers, on usings of burley during the most recent 12-month period.

OMS computed and issued allotments to 75 dealers and 43 manufacturers qualifying for allocations, and handled 71 petitions for relief.

Surveys conducted during the year covered (1) the price and cost of producing hogshead materials and other wooden containers; (2) requirements of pyrethrum to control the tobacco moth; (3) requirements of burlap to be used in shipping undried tobacco to processing plants and for other purposes; (4) requirements of tobacco manufacturers and processors for machinery; (5) the ability of equipment manufacturers to produce minimum requirements of tobacco processing and manufacturing machinery.

Statistical analyses were made of growers' reaction to price in adjusting production to market demands; of problems arising from methods of distributing tobacco products; of adaptation of tobacco data to the swing of business cycles by graphic presentation, with interpretation; of prewar relationships with those of the war period to determine whether they have been maintained, modified, or destroyed; and of the accuracy of monthly production data of the United States Crop Reporting Board as compared with the quantity actually marketed.

Extensive studies were made of tobacco production in the Philippine Islands. Foreign tobacco monopoly studies were made with a view to the possibility of recapturing former export markets for increasing present foreign outlets for American tobacco—especially for the dark types. Also made were analytical studies of the requirements submitted by Allied Nations for nicotine sulfate under lend-lease to determine the justification for these requests. Another research study was aimed at discovering the availability of certain foreign-grown tobacco, the prospects of obtaining this tobacco during the war, and of its production in these foreign countries immediately after their liberation.

STANDARDIZATION RESEARCH

During the year revisions were recommended in the Official Standard Grades for Dark Air-Cured Tobacco (types 35, 36, and 37) and the Official Standard Grades for Burley Tobacco (type 31). Proposed standard grades for Maryland tobacco (type 32) were given practical application tests preparatory to their recommendation as official standard grades. Research work was begun to test and analyze the burning quality of various types and grades of tobacco, and research was conducted relating to other factors such as leaf body or density and the relation between color and other quality elements.

INSPECTION

During the year inspection service was maintained on 110 out of a total of 145 auction markets, of which 140 markets¹ had been designated by the Secretary of Agriculture under the Tobacco Inspection Act for free and mandatory inspection service. More than 1,382 million pounds of growers' tobacco were inspected, exclusive of nearly 96 million pounds of resales, or approximately 78 percent of the total sold at auction. (See table 18.)

In addition, approximately 2 million pounds of tobacco in hogsheads were inspected for cooperative marketing associations, and approximately 7½ million pounds were inspected in connection with the operation of the tobacco-diversion program for nicotine purposes. Inspection service was furnished also in connection with the manufacture and shipping under lend-lease of cigarette and native twist tobacco.

The inspection service covered all auction markets at which fire-cured, dark air-cured, and burley tobaccos were sold, and 46 out of 76 markets² on which flue-cured tobacco was sold. There was no inspection service on Maryland tobacco except for price-reporting services. A shortage of inspectors hampered expansion of the service to the remaining markets in the flue-cured producing area. During the year OMS employed for inspection work men with farm experience in curing and handling tobacco, the aim being to develop them into qualified inspectors, after intensive training through a marketing season or two. Good results have been attained from this policy.

¹ Six of the 140 markets sell 2 types and are listed twice.

² Seventy-five flue-cured markets had been designated by the Secretary. A referendum was to be held for the additional market that operated for the first time during 1944.

TABLE 18.—Tobacco inspection service, 1944-45 season

Type of tobacco	Auction markets	Sets of buyers	Tobacco sold	Inspected markets	Sets of buyers	Tobacco inspected	Percentage
	<i>Number</i>	<i>Number</i>	<i>Pounds</i>	<i>Number</i>	<i>Number</i>	<i>Pounds</i>	<i>Percent</i>
Flue-cured (11-14)-----	176	113	1,074,397,165	46	72	694,097,856	64.6
Fire-cured (21-24)-----	12	15	56,556,832	211	15	56,556,832	100
Dark air-cured (35-37)-----	8	6	43,701,330	8	6	43,701,330	100
Burley (31)-----	45	54	588,239,378	45	54	588,239,378	100
Southern Maryland (32)-----	34	5	17,147,166	-----	-----	-----	-----
Total-----	145	193	1,780,041,871	110	147	1,382,595,396	77.7

¹ One market not designated; 1944 first season of operation.

² One market did not operate.

³ Maryland markets not designated, and not officially inspected. Limited inspection service maintained for price reporting only.

TRAINING

Continuation during the year of the educational program resulted in the demonstration to approximately 63,000 tobacco growers of the grades, the best methods of handling and preparing tobacco for market, and the use and value of Federal inspection and market reports on the auction floor. The volume of demonstration work is indicated in table 19.

TABLE 19.—*Tobacco demonstration work, 1945*

Item	Number	Attendance
Farm demonstrations.....	1, 582	19, 009
Farmers' meetings.....	276	7, 517
School demonstrations.....	758	27, 878
Farm visits and other contacts.....		8, 155
Exhibits at country fairs and farm conventions.....	5	792
Training courses for inspectors.....	6	117
Practical tests given inspectors.....	5	22
Pieces of literature distributed.....	59, 275	

MARKET NEWS

Tobacco market news reports were issued daily and weekly during the 1944-45 season from 2 permanent field offices and 10 temporary offices set up to cover the various types as the marketing seasons progressed. This was two less than the number of temporary field tobacco offices last year.

Continued during the year was a special program, developed in 1943 in cooperation with the Agricultural Adjustment Agency, whereby current and season-to-date information on total pounds sold and the general average price was made available.

In the 1944-45 marketing season, 1,026 separate issues of reports, including regular daily, weekly, and seasonal reports and special reports for the press and radio were released, or a total distribution of 664,375 copies. By far the greatest single distribution was made direct to growers, at auction-marketing centers, who received 546,529 copies (83 percent). Separate radio and press issues totaled 504. Distribution of the 546,529 reports furnished to growers at the time their tobacco was placed on sale was made on 538 auction floors located at 108 marketing centers and covered 14 tobacco types in 12 States.

STOCKS REPORTS AND PUBLICATIONS

This year the quarterly report, Stocks of Leaf Tobacco, was further expanded to include tables on the disappearance by marketing years for each tobacco type and on the conversion factors used in each type for adjusting for losses in weight in connection with stemming, handling, sweating, and drying. Revision of reporting forms used as a basis for the Tobacco Stocks Report was studied with a view to gaining greater accuracy.

The Annual Report on Tobacco Statistics, Commodity Statistics No. 12, was expanded by the inclusion of several additional tables. Data on exports and imports were omitted because statistics have not been available for publication.

Also issued was a Tobacco Market Review of each of the following

four classes: Flue-cured types, class 1; fire-cured types, class 2; light air-cured types, class 3 (a); and dark air-cured types, class 3 (b). These reviews include such information as opening and closing dates for the various markets; the number of sales floors and buyers; warehouse charges; summaries of sales by crop years, types, months, and States; information on resales; analyses of the crop on a group, quality, and color basis; weekly and season prices by grades; and charts showing changes in price of representative grades over a period of years. For the 1944-45 season the reviews included several additional tables, such as auction charges on warehouse floors and ceiling prices by grades.

OTHER COMMODITIES

Fish, cocoa beans, and honey were among the more than 100 unrelated smaller miscellaneous commodities whose distribution was under some degree of control by OMS. Separate treatment and handling had to be given to each of these diverse commodities, some of them produced in the United States and others only in foreign countries. They are sold in almost every market, and their importance and essentiality have shifted constantly. Administrative controls were complicated by the fact that some of them required set-aside orders and others required continuing distribution quotas.

BEER, WINE, DISTILLED SPIRITS, AND MALT

During the year 95 out of 179 applications for priority assistance from members of the alcoholic beverage industries were approved. These applications were for construction of new facilities and replacement of worn-out equipment.

WFO 66, which restricted the use of malt, rice, and hops in the production of malt beverages so as to provide additional supplies of these items for the production of industrial alcohol, and which had the effect of setting aside 15 percent of beer production for the armed forces, was amended eight times during the year. The amendments for the most part served to increase or decrease brewers' quarterly quotas of malt in accordance with the supply available. One amendment restricted brewers' purchases or receipts of hops and hop extracts to 150 percent of their 1943 calendar use, less inventories as of September 1, 1944. Another, besides establishing malt quotas, restricted malt-grain inventories of all brewers except brewer-maltsters to 80 percent of their 1942 calendar-year use.

Of 356 petitions received, 306 were approved.

CANDY BARS

Because ordinary methods of procurement were not providing enough 5-cent candy bars for the armed forces, WFO 115 was made effective October 7, 1944. The order required all manufacturers of candy bars, candy rolls, or candy packages, intended to retail at 5 cents, to set aside for sale to Government agencies during each month a quantity equaling 50 percent of their average monthly production during the first half of 1944. Solid chocolate bars were excluded from the order because more than half of the production of this type of candy was already being supplied to the armed forces.

Procurement under the order was directed by the Army Quartermaster Corps, which allocated certain quantities to the various Gov-

ernment agencies eligible to receive set-aside candy. The agencies presented contracts and shipping instructions to the manufacturers.

All but one of the 239 petitions for relief from hardship were granted.

An amendment issued in February provided for the automatic release of items set aside during the last quarter of 1944, but not purchased by Government agencies. Other amendments provided for a reduction in the set-aside percentage and for expansion of the number of Government agencies permitted to procure confectionery items from the quantities set aside for Government use.

The order was terminated April 1, 1945.

COCOA BEANS

Three amendments to WFO 25, originally issued to conserve the supply and to effect equitable distribution of cocoa beans for military and essential needs, were issued. One of them prohibited the sale of any cocoa-bean product for use in filling orders to quota-exempt agencies unless the purchaser certified that he would not resell the product except in the form of confectionery or other food products ready for retail distribution, and that his inventory of the product purchased did not exceed his requirements for all manufacturing purposes for the ensuing 60 days.

Petitions for relief numbered 74, these being presented principally by small confectioners who because of abnormally low base-period purchases of chocolate products were unable to obtain adequate supplies from processors. In cases of extreme hardship, cocoa-bean processors were allowed to grind beans on a quota-exempt basis to provide reasonable quantities of chocolate products for such users.

OMS granted 24 of 30 applications for priority assistance.

COFFEE

WFO 109, issued July 28, 1944, was designed to make adequate quantities of soluble coffee available to the armed forces and other Government agencies, to meet schedules, and to permit moderate stockpiling. The order required manufacturers to set aside 100 percent of their production of soluble coffee for sale and delivery to Government agencies. In the latter part of the fiscal year stock piles became sufficient, and Red Cross requirements were materially reduced in view of the release of American prisoners of war. Consequently, the order was canceled on June 1, 1945. Of the 50 petitions for relief from hardship received, 23 were granted. The order was amended twice during the year.

Approximately 100 applications for priority assistance were processed; 40 of them were approved.

FISH

WFO 44 reserved for Government use a portion of the production of canned fish and prohibited canners from delivering canned fish to the civilian trade unless the Government quota had been delivered. Set-aside quotas, based on pre-season estimates of production and essential requirements, were established early in the calendar year and adjusted periodically in the light of actual production and requirements.

During the fiscal year military and lend-lease requirements increased so rapidly that it became necessary to maintain a continuous

study of production and requirements in order that the set-aside quotas might be adjusted promptly to expanding essential needs. Six amendments were issued for the purpose of revising set-aside requirements.

Of 90 petitions of relief from hardship submitted, 84 were granted.

Total quantities released from the order restrictions during the past year amounted to less than one-half of one percent of the pack.

WFO 72, issued in August 1943, was designed to assure equitable distribution in the United States of seven species of imported salted fish. The order provided a quota system under which qualified importers were authorized to receive amounts equal to 60 percent of their 1942 importations from Canada, 65 percent of their 1940 importations from Newfoundland, and 70 percent of their 1942 importations from Iceland. During the year the order, amended twice, assured equitable distribution of salted fish allocated to the United States by giving opportunity to all importers, large and small, to obtain a proportionate share. Under amendment 2, 18 petitions were received of which 16 were granted.

The quota system had to be coordinated with authorization of salted-fish importations, which was prescribed in WFO 63 and administered by WFA's Office of Supply, in order that the allocation of the Combined Food Board might not be upset and that no importer might overship his quota at the expense of other quota holders.

Fresh and frozen fish were exempt from Government requirements except for relatively small quantities taken by the armed forces.

OMS studies of fish made during the year included several reports and field surveys of the cold-storage situation in New England, a report of estimated 1945 usage of refrigerator cars and boats using ice (to determine the year's ice requirements), a study of allocation of halibut on the Pacific coast (including Alaska), continuing surveys of the requirements for canning oils in the canned-fish industry, and studies of the requirements for fish containers.

HONEY

The main purpose of WFO's 47 and 47.1 was to channel the bulk of the honey supply to the homes or packers whose ultimate market is the home. A secondary purpose was to encourage the development of new products or new formulas in which honey is not used primarily as a sugar substitute. The orders restricted the amount of honey that might be used by a manufacturer of food products to 600 pounds or 120 percent (whichever was greater) of the quantity he used during the corresponding period of 1941.

A major administration problem was to restrict the use of honey by firms interested in honey only as a temporary substitute for sugar. To meet the problem, news of the order was spread by means of all available media (including honey buyers and distributors) and through informal checking against the possible overuse of honey by certain industrial users.

Fifteen of 18 petitions for relief were granted.

ICE

In March 1945, OMS recommended that the Office of Price Administration make an adjustment in the relation between the price of ice for car icing and ice for other uses. Purpose of the recommendation

was to channel a larger proportion of the available ice into car icing (the ice supply for this purpose during the year was considerably below current demand) and away from householders and commercial and industrial users.

INSECTICIDES

INSECTICIDE ACT

Purpose of the Insecticide Act is to protect farmers, livestock growers, and other users of insecticides and fungicides against losses resulting from the use of adulterated or misbranded products. Under provisions of the act, OMS during the year investigated insecticides and fungicides that moved in interstate commerce.

There was practically no pyrethrum for civilian use, and the small supply of rotenone-bearing insecticides had to be reserved for special crop and livestock uses. Substitutes were improvised when possible, and attempts were made to stretch available supplies.

Official samples tested and reported numbered 1,937. Of these, 430 failed to comply with the act requirements. The violations in 370 cases, or about 19 percent of those reported, were sufficiently serious to justify action, whereas 60 less serious violations were adjusted informally.

Seizure action was begun on shipments of 16 products; and 27 criminal cases, concerning 24 products marketed by 13 different manufacturers, were submitted for prosecution.

Criminal cases concerning 31 samples and covering 28 different products manufactured by 18 manufacturers were adjudicated. All cases ended in favor of the Government.

Insecticides and fungicides used in agriculture were given special attention during the year, more than 43 percent of all samples reported being agricultural. New products appeared on the market constantly: 81 of 349 samples of miscellaneous plant insecticides and fungicides tested represented new products. Fifty-two of the samples tested were sufficiently misbranded or adulterated to warrant citation of the shipper, and 3 were seized. The labels of 15 products were corrected informally, and 41 were held in abeyance until additional information was forthcoming.

Of the 106 samples of products intended for use on animals against lice, fleas, ticks, and grubs, citation of the shipper for misbranding or adulteration was warranted in 19 cases, or about 18 percent. Of 38 products sold for the control of screwworms examined, 14 were sufficiently misbranded to necessitate citation, and 2 were held in abeyance. Of 3 samples of preparations for use against bots in animals, 1 was sufficiently misbranded to require citation.

The labeling of 41 percent of 294 disinfectants examined was unsatisfactory.

Household insecticides comprised about 31 percent of the samples tested. Of these 594 samples, 216 were new to the records. About 27 percent of the samples tested warranted citation, and 5 were seized. The products included preparations for killing flies, moths, ants, roaches, termites, and other household insect pests.

New methods of analyzing and testing must be continually developed to handle the new products that constantly reach the market. During the year a lamp method for the gravimetric determination of sulfur in spray oils was tested and found satisfactory. The Winter method

for determining organic chlorine was adopted for use with the lamp apparatus used in the sulfur determination. A test of the Umhoefer method for organic chlorine gave good results. Qualitative and quantitative methods were devised to determine dinitro-anisole in insecticidal dusts. The method of determining water in insecticides in the presence of isopropyl alcohol and other wetting agents was investigated, and methods of determining fluorine were studied and revised.

Household insecticides tested were mainly products used for controlling roaches and waterbugs, and a smaller number of products for controlling clothes moths, carpet beetles, and mosquitoes. A standardized method of testing roach preparations was developed, and newly devised methods of culturing bedbugs and house flies were put to good use in coordinating standardized methods of testing products intended to kill these pests.

Also under test were fungicides for use against diseases of more than 20 food crops and ornamental plants. A number of tests of wood preservatives were in progress.

Examination of disinfectants became more exacting because of the appearance on the market of an increasing proportion of synthetic germicides and of the general tendency to "fortify" standard types of pine oil and coal-tar disinfectants with synthetic preparations.

For other Government agencies, OMS analyzed 44 unofficial samples chemically, examined 18 samples bacteriologically, and tested 6 samples entomologically.

NAVAL STORES

NAVAL STORES ACT

During the year samples were collected and analyzed from 182 lots or shipments of turpentine, of which 19 were found to involve some type of noncompliance with the Naval Stores Act.

Owing to the urgent need for rosin and its severely curtailed production in southern producing areas, consumers were forced to accept rosin of almost any kind or grade obtainable and to adjust plant processes to its use. Partly for this reason, no complaints of the purchase and delivery of misgraded rosin were referred for investigation or settlement.

The inspection and certification of turpentine and rosin for producers and dealers continued at about the same relative level as during the previous year—about 25 percent of the crop. Inspections of 9,300 drums of turpentine and 164,994 drums of rosin were certified in 677 turpentine and 6,625 rosin certificates.

Inspections were continued for vendors given contracts for furnishing all types of naval-stores products under lend-lease. Fifty-nine lots, embracing 18,744 drums, were inspected and certified, including steam-distilled wood turpentine, wood rosin, kiln-burned and retort pine tars, tarene, pine oil, tall oil, rosin oil, and specially treated rosin and rosin derivatives. Forty-four laboratory analyses were made of official samples from these lots, since all deliveries except normal wood rosin were subject to test to determine compliance with specification.

At the request of dealers, prospective purchasers, and Government purchasing agencies, 39 miscellaneous samples of turpentine, rosin, and pine oil were tested and analyzed in the Washington laboratory. In addition, samples from southern turpentine storage tanks where

Commodity Credit Corporation held stocks were periodically tested in order to assure proper storage and regular freshening by the addition of new turpentine.

Calls increased for sets of the U. S. Official Rosin Standards. Twenty-one sets were issued on security loan to new depositories.

Two laboratory projects related to standardization were completed. One was a study of various methods available for determining total terpene alcohols in pine oil. The other was the adaptation of the so-called Karl Fischer method to the determination of moisture in naval-stores products. The Fischer method, which employs a complex reagent consisting of pyridine, iodine, and sulfur dioxide dissolved in methyl alcohol, proved to be well-adapted to the problem.

Further work was done on a standard method for determining the unsaponifiable matter in rosin.

Work was also done on a new method for determining the softening point of rosin by a ring-and-ball method.

OMS collaborated with the committee on naval stores of the American Society for Testing Materials on the standardization of various methods of testing and analyzing naval stores.

Also studied was the correlation between viscosity determination on pine tars by means of two different types of viscosimeters.

A comprehensive list of tentative standard definitions of terms relating to naval stores was prepared.

Two projects concerned with regulatory work were concluded. One was a method of testing turpentine and detecting steam-distilled wood turpentine in it by chemical means. The other was a method of detecting and proving the presence in turpentine of destructively distilled wood turpentine.

PEANUTS AND PEANUT BUTTER

WFO 89, entitled Conservation and Distribution of Peanuts and Peanut Butter, was terminated January 4, 1945. This order had authorized the prescription of quotas for peanuts and peanut butter. Continuation was considered unnecessary because an invocation of the powers authorized in the order had not become necessary.

About 50 requests for priority assistance were received, most of them proposing expansion of factories to take care of Government orders. Because existing equipment was believed adequate, most of them were at first denied, but during the latter part of the year many of these requests were approved because labor shortages made the handling of Government business on time almost impossible for existing plants. In addition, some 70 other priority requests for assistance in obtaining replacements for worn-out machinery were processed, most of them being approved.

PEPPERMINT OIL

WFO 81 provided for equitable distribution of the limited supplies of peppermint oil available for civilians by permitting manufacturers to use a certain percentage—varying with the supply available—of their 1941 use. Increased domestic production during the crop year 1944, plus imports of cornmint oil and menthol from Brazil, made it possible to amend the order in October 1944 to provide the following changes: For the manufacture of confectionery, chewing gum, and miscellaneous articles, from 70 to 80 percent; dentifrices, from 75 to 85

percent; pharmaceutical preparations, from 100 to 110 percent. The order was amended four times during the year.

Fifty-four of 70 petitions for relief were granted.

During 1944 one of the large producing areas in the State of Washington produced an oil of only fair quality. It was not, however, up to United States Pharmacopoeia requirements because the optical rotation of the oil was low. In cooperation with the Bureau of Plant Industry, Soils, and Agricultural Engineering, OMS began a study of soil, roots, stocks, harvesting conditions, and distillation methods for the purpose of discovering why this crop had not come up to standard.

SOFT DRINKS

Seventy-five applications for priority assistance were received. Most of them requested a rating to obtain replacement for worn-out equipment. Because the amounts of critical materials allotted to manufacturers of beverage machinery were relatively small and most manufacturers were engaged heavily in war work, priority ratings were reserved for those processors who required the equipment in order to maintain normal operations. No facilities were permitted for expansion.

SPICES

WFO 19 was put into effect February 8, 1943, to make possible the equitable distribution through the various channels of trade of the spices available for civilian consumption. In the 1945 fiscal year it was amended six times, mainly for the purpose of adjusting quotas to the available supply. The quota percentage of pepper was reduced from 40 to 25 percent because heavy military requirements had reduced stocks to a dangerously low point and there was little hope of replenishment from foreign sources during the 1946 fiscal year. For approximately the same reason, the quota percentage of cinnamon was reduced from 35 to 25 percent. For ginger and mace, on the other hand, it was possible to withdraw restrictions when a nearly normal supply became available. Amendments also restricted acceptances of cinnamon and pepper by packers.

Most of the 22 petitions for relief were granted because, for the most part, they requested transfers of quotas, the granting of which did not jeopardize attainment of the purpose of the order.

TEA

WFO 18, in force since February 6, 1943, was issued to effect equitable distribution of available tea supplies through the establishment of quotas for the various segments of the industry distributing tea. The order also contained restrictions governing acceptance of tea and packaging.

During the fiscal year, seven amendments were issued, of which two adjusted the permissible acceptance of tea by packers. A reduction was necessary in July because tea arrivals were reduced during that month. Because arrivals were heavier in the latter part of 1944 and many packers were unable to deliver their full quotas, supplies accumulated until it became advisable to increase permissible acceptance by packers. At the end of 1944, supplies had accumulated to the extent that it was possible to remove the quota limitation on deliveries to the civilian trade (packers had been restricted to 75 percent of 1941

deliveries). Accordingly, on January 1, 1945, the order was partially suspended. On April 1, the partial suspension was continued to run through the remainder of the fiscal year, although tea packers were required to continue to submit a quarterly report showing acceptances, deliveries, and inventories.

Only 29 petitions were processed, of which 27 were granted.

WFO 21, made effective February 15, 1943, to provide for the distribution of teas imported by the U. S. Commercial Company to packers through former importers designated as qualified distributors, remained in force. During the year 1 qualified distributor was added to the 18 whose activities already were controlled by the order. The 2 amendments issued during the year were of a technical nature.

VITAMINS

Twenty-one requests for assistance in obtaining materials and equipment needed in producing and testing vitamins and vitamin preparations were received, of which 19 were approved. Priority assistance was given to a plant in Florida for equipment to recover ascorbic and citric acids from citrus waste material. In full production, the plant as planned would produce 100,000 pounds of ascorbic acid and 2 million pounds of citric acid a year.

The problem of determining vitamin-A potency in vitamin-A-bearing oils and vitamin-A preparations was studied. Specifications for vitamin-A preparations purchased by Government were established. Despite extensive research by many investigators, a completely satisfactory method for correlating physical constants with bio-assays did not exist. OMS worked with vitamin laboratories engaged in experimenting on methods for testing the several vitamins, and with Government and industry experts on vitamin-A methodology. Methods for preparing test samples were improved, and a better agreement of results among laboratories was obtained.

OMS worked with industries to provide suitable packages for multivitamin preparations purchased by Government for overseas shipment, and made studies of various formulas for multivitamin tablets.

Suitable granular premixes were developed for enriching corn grits with niacin, riboflavin, and thiamine, and a suitable premix of vitamins in particles resembling rice kernels was being developed for the enrichment of white rice.

YEAST

The high military demand for active dry yeast resulted in a set-aside, under WFO 112 (issued September 1, 1944), of the entire production for sale and delivery to Government agencies. The order, which was amended once, also required each manufacturer of the product to submit a monthly report of production, deliveries, and inventories. No real hardship to civilian consumers resulted because adequate supplies of fresh compressed yeast, in household-size packages, were available. Only two petitions for relief were received.

One pound of active dry yeast will do the same work as 2 pounds of compressed yeast, and the former does not require refrigeration; consequently, the 100 percent set-aside has resulted in considerable savings to the Army and Navy in cost and shipping space.

Thirty-six of the 46 priority applications handled were recommended for approval. Most of the requests were for equipment to be

used in the expansion of active-dry-yeast production. OMS assisted the yeast industry in the development of an active dry yeast with improved baking and keeping qualities, and worked with the Office of the Quartermaster General, members of the industry, and other Government technical representatives toward developing new standards and testing methods for active dry yeast.

OMS representatives encouraged the industry to perform additional research on brewer's yeast. The industry improved the taste, vitamin potency, and the general characteristics of brewer's debittered yeast. Because conservation of larger quantities of brewer's yeast was encouraged, the Government was able to obtain a superior product at approximately half the price paid earlier.

IMPORT ACTIVITIES

One of the most difficult war problems in connection with many of these miscellaneous commodities resulted from the reduced volume of imports, which caused inequitable distribution and local shortages of commodities that are imported. Generally, imported commodities are of two types—those purchased privately through regular commercial channels, and those purchased and imported by a Government agency. (Some commodities—cocoa beans, for example—are handled by both methods.)

OMS was responsible for (1) determining the most satisfactory method of importation, (2) recommending quantities and periods of public purchase, (3) developing a plan to establish equitable quotas for each importer, and (4) approving the import of authorizations to qualified purchasers.

Cocoa beans are included in WFO 63 to implement allocations, provide for equitable distribution of imports among importers of record, and assure the proper use of available shipping space from the countries of origin. OMS passed on 420 authorizations for imports from Latin America, the British West Indies, Ceylon, Samoa, and the New Hebrides, and computed import quotas for all importers. In addition, OMS directed the distribution of cocoa beans imported from West Africa by the U. S. Commercial Company of the Foreign Economic Administration to established importers who normally imported from this source before the war. OMS also made all allocations to importers and dealers.

Coffee importing continued under WFO 63. All green coffees were imported by private industry under import authorizations in order that shipping space might be divided equally and that the extensive distributive and procurement facilities of the industry might be used. Approximately 350 participating importers received authorizations based on their 1941 import activity. OMS approved the authorizations at intervals of 3 to 6 months.

More than 1,000 authorizations for fish products under WFO 63 were issued. The effect of WFO 63 on the fish industry was (1) to provide the vehicle for an equitable distribution of the salted fish allocated to the United States by the Combined Food Board; (2) to prevent much unnecessary cross hauling of the fish products and furnish the machinery to carry out the Combined Food Board allocations; (3) to provide machinery to bring about an immediate and sharp reduction in the

foreign price; and (4) to reduce the volume of imported fish that importers would have liked to handle.

Spices under the import regulation during the year included pepper, cinnamon, mace, nutmeg, pimento, and ginger. The last two commodities were withdrawn from the list in December. OMS established quotas for each importer and recommended to WFA's Office of Supply the issuance of import authorizations.

Tartaric acid and tartaric raw materials were placed under WFO 63 on November 13, 1944, to implement the FEA public-purchase program and the Combined Food Board allocations. OMS recommended approval of 54 of 56 applications for authority to import.